

THE
PROSPECTS OF VALLEJO;

OR EVIDENCES THAT

VALLEJO WILL BECOME

A GREAT CITY.

A re-publication of a series of articles originally appearing in the
VALLEJO EVENING CHRONICLE, from March to July 1871.

VALLEJO :
CHRONICLE STEAM PRINTING HOUSE.
1871.

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PROSPECTS OF VALLEJO.

INTRODUCTORY.

We propose to consider the prospects of Vallejo in a series of articles; but, as the subject is not new, we shall refer briefly to those points which have heretofore been fully discussed and give more space to points which have not been made so familiar to the public. Even if we should repeat something that has already been said, or said more forcibly or elegantly, we shall still expect lenient criticism from the citizens of our town who believe in its future greatness and wish to lay the reasons of their belief before others. Lenient criticism, however, we expect only for saying what has been said before; not for any carelessness in our treatment of the subject, and still less for any exaggeration of the absolute or relative advantages of Vallejo. On the contrary, we request the reader to examine all our statements and arguments with critical scrutiny. The facts and reasoning which we shall adduce are not the exclusive property or in the exclusive possession of anybody; they are open to all—and the facts, if true, can be verified, and the arguments, if unsound, can be controverted by thousands of persons. We have not the least desire to mislead the ignorant or the inconsiderate, for we know that by so doing we should gain nothing for ourselves or for Vallejo. Of course, we do not pretend to infallibility of judgment. We may over-estimate the influence of some facts and under-estimate that of others; but we doubt not that time will prove the general soundness of our views.

THE ADVANTAGES OF OUR TOWN.

The natural situation of Vallejo is unsurpassed on our coast for general commercial and manufacturing business. The harbor is five miles long, a quarter of a mile wide, and thirty feet deep at low tide, with excellent protection against winds and unsurpassed holding ground. This gives abundant room for a great commerce; but in case of need the contiguous harbor of Benicia, three miles long and half a mile wide, can be used in addition.

This harbor is at the head of navigation for large ships, and as these furnish our cheapest transportation, in so far it is preferable for the import and export trade. The harbor is conveniently accessible from the ocean. The channel is wide, deep, distinctly marked, free from dangerous currents, winds and rocks, and provided with steady breezes, enabling sailing vessels to reach and leave Vallejo without difficulty. We do not remember having heard of the wreck of any vessel between San Francisco and Vallejo. The distance from the ocean is twenty-six miles—six miles farther than New York, but nearer than London, Hamburg, Antwerp, Glasgow and Amsterdam, five of the principal commercial cities of Europe.

The shores of San Francisco Bay and its tributary waters are high, rocky bluffs or shallow mud flats, except at Vallejo, which is the only point where the deep channel comes near to a wide extent of level upland—and it is, therefore, the only good natural seaport site on these waters.

The site of Vallejo is partly an extensive plain, and partly gentle sloping hills, with space enough to accommodate hundreds of thousands of inhabitants. The water front, counting both sides of the harbor, is ten miles long, and on a considerable part of it the solid upland comes down very near to the deep water, making the best natural water front in the State. The town has nine wharves reaching to deep water, built at less expense than any equal number in San Francisco, and at less expense than an equal number could be built on the unoccupied part of the water front of either Oakland or San Francisco.

Vallejo is fitted by nature to be a railroad centre. Level routes run out to the north, northwest, northeast and east, the two last directions being those from which the chief trade of the State and of the remainder of the continent comes to San Francisco Bay. Oakland has no secure natural harbor accessible for large

vessels, and San Francisco is practically inaccessible by rail. Sacramento and Marysville, through which come the Middle Pacific and Oregon railroads, are only half as far from Vallejo as from Oakland by rail.

The vicinity of Vallejo, including the valleys of Napa, Sonoma, Petaluma, Russian River, Green, Suisun, Yaca, Berryessa, Clear Lake and Colusa Creek, is in its agricultural resources the richest part of the State.

Whenever fresh water is introduced in large quantity and at low price, as it can be better than at any other town on deep water in the State, Vallejo will have the best site for manufacturing on the coast, taking into consideration its railroad and shipping facilities, and its proximity to the markets and to the supplies of fuel and raw material of home production.

Vallejo having brackish and nearly fresh water in its harbor, has none of the ship worms which ruin the wharves at San Francisco and Oakland and prevent the storage of timber in the water there. Shipbuilders want to work in a place where they can keep large stores of timber afloat in the harbor without danger of injury from worms.

The foundation of the town site being solid, earthquakes are rarer and less severe than at San Francisco—brick buildings will be more numerous proportionately; there will be less danger of great fires, and insurance will be cheaper.

The natural excellence of the water front, and the low cost of building and maintaining wharves, makes Vallejo practically a free port; and import and export business will be done here more cheaply than at any other point in the State. Though it as yet possesses few warehouses, no resident importing or exporting merchants, or wealthy bankers, and few conveniences for large commercial business, it has already become one of the chief seaports of California for exporting grain, and it is increasing in foreign trade rapidly.

The advantages of Vallejo have been recognized by capitalists, who have built and purchased a system of railroads to terminate here. These roads run to Sacramento, Marysville, Calistoga and Healdsburg, with an aggregate length of 185 miles. At Sacramento and Marysville the Vallejo roads tap the Middle Pacific and Oregon railroads; and preparations are being made for the construction of nearly 1,000 miles additional road to Oregon and Salt Lake, so as to catch the entire Eastern and Northern traffic. Vallejo has, or soon will have, close connection with every working passenger railroad in the State, save the Los Angeles which is only 25 miles long.

THE GROWTH OF VALLEJO.

Vallejo has not grown so much in the last two years as many of its friends anticipated; yet it has grown rapidly and steadily. Ten years ago, at least twenty-two other towns in the State had a larger population; now only six exceed it. In 1860, the number of inhabitants was 1,431; in 1870, 6,392—an increase of 346 per cent.,—a larger per centage than in any other town of the State, save Oakland, in the same period. Most of the growth has been made within the last four years. A comparison of the number of votes cast in 1860 and 1867 showed an increase of less than 50 per cent. in seven years, whereas a similar comparison between 1867 and 1869 showed an increase of 62 per cent. in two years.

Although the advance of our town since the eventful "driving of the last spike" in the Pacific Railroad has been slower than we anticipated, yet Vallejo has not alone suffered by the depression. In no town of California have the prices and the demand for land been sustained better relatively than here, and no where else is confidence in the future stronger.

The last two years have rendered us many services—the benefits of which are yet to come. The public mind has been enlightened as to the natural advantages of our situation, and it is now generally admitted that the main commercial, financial and manufacturing business of California could have been done here cheaper and more satisfactorily than on the peninsula of San Francisco. It is a common opinion that the present metropolis cannot become a railway centre, and that a large part of its business must be transferred to some other place at no distant time. Doubts are entertained as to whether Vallejo, Oakland, or Benicia will succeed in securing the bulk of the trade that is to leave San Francisco, but our town is considered to have, at least, an equal chance. Numerous plans have been dis-

caused for crippling our railroads, but all have been abandoned. We have now a net-work of roads, and this is their permanent terminus. Vallejo has become the main outlet and seaport for the fertile and extensive country north of San Pablo Bay and west of the Sacramento river, and her chances for rising to the first position among the cities of California are steadily improving.

PAST PREDICTIONS.

In asking our readers to consider predictions of the future growth of Vallejo, it is proper to consider the predictions made and the anticipations entertained in regard to the progress of our town within a few years past. And first we shall call attention to the predictions made in a pamphlet called "The Future of Vallejo," published here in the Spring of 1868. At that time the population was about 3,000; work on the railroad to Sacramento had been commenced but no iron had been put down; no cars entered the town from any direction, the only connection with the metropolis was by a little steamer which went up every other day from San Francisco to Suscol; there was no loading of ships with grain; no freight or passenger trade changing conveyance here; no elevator, no flour mill, and only one wharf in use; and the town had no importance in public opinion. On the other hand, San Francisco held, and it was generally supposed would continue to hold, the monopoly of the import and export trade of the State with its incident wealth, growth and prosperity.

REALIZATION AS TO RAILROADS.

The pamphlet predicted that Vallejo would grow rapidly—that it would become the terminus of an important railway system, and that it would take foreign commerce from San Francisco. So far, the realization has been complete. The cars now run every day to Sacramento, Marysville, Vacaville and Calistoga, and work has been commenced on the road to Petaluma, there to connect with Healdsburg; and the surveys for a road to Red Bluff are under way. Our railroad system has not exercised so much influence in building up our town as was predicted; but the disappointment is not final, nor is the delay in the fulfillment of our hopes chargeable to any lack of natural resources, but to the development of a rival railroad system which has been built by the aid of public money, and has taken away trade that should have come to us, and will, we believe, come to us in the future.

The superiority of the route of our main line is impliedly admitted by the Central Pacific Railroad Company, who, after satisfying themselves that they could not buy out the California Pacific Railroad, have announced their purpose to build a line in the same general direction to compete with it. The Vallejo roads have not only the best local trade in the State, but they tap the main transcontinental and coast lines.

It had become evident in the Spring of 1868 that the Central and Union Pacific Railroads would be completed, but many persons supposed that the Western Pacific would not be, for the reasons that the Vallejo route was decidedly superior and the road would be finished in advance; and that the company which owned the Western Pacific franchise had parted with the land-grant. It was not until nearly a year and a half later that the Western Pacific railroad was finished. By its completion much of the trade that would otherwise have come to Vallejo was diverted. The Central Pacific Railroad Company used all their influence to prevent passengers bound across the continent from coming this way. Besides, the California Pacific Railroad Company was not until lately strong enough financially for the work which it undertook to do, so the road was not put into first rate condition.

REALIZATION AS TO SHIPPING.

One or two cargoes of wheat were shipped from Vallejo about ten years ago, but the enterprise was not profitable enough to justify a repetition, and therefore our wheat had for six or eight years been sent in schooners to San Francisco

there to be loaded for the Atlantic. In the crop year of 1868-69, four ships came to Vallejo to load for Liverpool; in the next year, 33; and in the present year, so far, 38. This year we have shipped 34 per cent. of all the wheat exported; last year we shipped 16 per cent., and the year before that 2 per cent.; and the preceding year none.

Besides establishing the business of exporting wheat, we have commenced to import lumber for reshipment by land and water. On account of having deep water and cheap wharves, lumber from Puget Sound and the lumber ports of Humboldt and Mendocino counties can be landed here for 75 cents less per 1,000 feet than in San Francisco, and so the interior dealers who want coast lumber come to us in preference, and the lumber is sent by the cars and schooners to Woodland, Davisville, Marysville, Sacramento, Stockton and minor places.

The prediction that Vallejo would soon be a port of entry, has not been fulfilled, but an Act of July 1, 1870, made it a port of delivery, provided that a surveyor of the port should reside here, and "that any vessel of 500 tons or over coming from or going to the sea, may proceed directly to or from Vallejo, and report through said surveyor to the collector of customs at San Francisco, and avoid the risk, expenses and delay of anchorage there." Another and later Act provides that instead of a surveyor of the port, a deputy collector shall reside at Vallejo.

SAN FRANCISCO NOT A TERMINUS.

It was predicted three years ago that San Francisco would not become a railway centre, and that it would be injured by the establishment of a railway system. The roads have been built and the predictions have been verified. San Francisco has no secure hold on the terminal business of any railroad in the State, save that from San Jose; and such insecure hold as it has is due not to its own strength, but to the weakness of its rivals, which are not prepared to do a general importing and exporting business.

It is proved that San Francisco is not a terminus for the Southern Pacific railroad south of San Jose, by the fact that the wheat trains from Gilroy run not to San Francisco, but to Oakland. The transportation to the latter place costs less because the grade is better, and the shipment there is cheaper because the cars run to the ships and there are no port charges. The advantages of shipping wheat from the San Joaquin Valley at Oakland are still stronger than in case of that from Santa Clara.

It was predicted that the real struggle of the future for the foreign commerce of San Francisco bay, would lie between Oakland and Vallejo. The prediction is now rapidly approaching verification. The commercial importance of the city of San Francisco has entered upon a rapid and inevitable decline. In proportion as her rivals can add to their present scanty facilities to accommodate shipping, they will take the importing and exporting trade to be done through the Golden Gate.

COMPETITION OF VALLEJO WITH SAN FRANCISCO.

We cannot "write up" Vallejo without showing up the disadvantages of San Francisco, and as such a course appears to some persons unnecessary and incusable, we must explain and justify it. We mean no falsehood, no injustice to any place or person, no injury to the State; we propose to set forth fairly the relative advantages of the rival places as we understand them; and if in spite of our desire to be just, our exposition should misrepresent San Francisco, our errors can be discovered by business men, to whose judgment we appeal, and can be exposed by other public journals. San Francisco has newspapers which can defend her and advocate her interests. Such discussions are necessary for the proper management of business, and she has no right to claim an exemption.

If Vallejo has the superior advantages which we claim, and if in consequence thereof she can do the metropolitan, commercial, financial and manufacturing business of the State cheaper than any other place, it is to the interest of the State that those advantages should be known as soon, as generally and as thoroughly as

possible. A decrease in the expenses of our importing and exporting business is equivalent to an increase in the income of our producing classes and of our State at large.

Our opposition to San Francisco is that of honorable emulation. We recognize her as a great city, one of the most splendid productions of our fertile century—rich, enterprising, generous, enlightened, liberal, eminent in the useful arts, second to none in refinement and intelligence, and unequalled on our continent in resources for social enjoyment. She contains one-fourth of the population and one-half of the wealth of the State—and every Californian has just reason to be proud of her; yet we hope that Vallejo will succeed her as the metropolis, and will be a worthy successor, richer, more enterprising, more generous. This hope may appear wild and its expression absurd, but its realization would, at any rate, mean no loss to California.

The decline of San Francisco is not indispensable to the prosperity of Vallejo. Our town has now 7,000 inhabitants, and it might grow much without taking business away from any other place. As a general rule the growth of a town is a benefit to the adjacent country, and San Francisco has undoubtedly been benefitted by the prosperity of Sacramento, Stockton, San Jose and Petaluma. Vallejo might obtain a population of 20,000 without injuring any rival town. California has an area as great as that of Spain, and resources for agriculture, mining, manufactures and fisheries at least as good, and having more intelligence and enterprise among her people, could support at least 7,000,000 inhabitants as well as Spain does 14,000,000; but if our State had only 1,200,000 inhabitants instead of half that number, Vallejo could scarcely fail to have 30,000, even if San Francisco should regain her former monopoly of foreign trade and should grow to double her present size.

But we do not believe that Vallejo will be a minor city in California, and we perceive no good reason why we should not state our opinions frankly. We claim that she will take away the foreign trade from San Francisco, and we cannot prove the soundness of that claim without calling attention to the disadvantages of our rival, and predicting that she is destined to lose the larger part of her revenues now derived from her position as the chief seaport of the State. Whether she can replace them by revenues from other sources, (as Philadelphia when she lost the largest share of the foreign commerce of the United States, changed her base and became the chief manufacturing city,) is a matter which does not come within the range of our present purpose to consider.

THE QUESTION ONE OF RELATIVE STRENGTH.

It would be useless to attempt to show what the future of Vallejo will be, by merely stating her own position. Her future does not depend on her absolute but in her relative resources; not exclusively on her own strength, but partly on the weakness of her competitors. High excellence of harbor, location, site, water front, climate, soil and railway facilities, would be of little value to her for foreign commerce, if another town not far off were still better provided in all these respects; nor would poverty of resource in many of these points prevent her from attaining greatness if all her rivals were still poorer. The consideration of the prospects of Vallejo includes an examination of the resources of all the towns that are now or will probably become her competitors; and any discussion of the subject without a candid statement of all the main facts would be unsatisfactory to the intelligent, and would mislead the ignorant.

INJURY DONE TO SAN FRANCISCO BY RAILROADS.

The topography of California will make railroads much more important here, relatively, than in the Atlantic States or in Europe. Only a small proportion of our people live west of our coast mountains, and we have few bays, navigable rivers, or favorable sites for navigable canals; so we must depend mainly upon railroads for our transportation; and they must exercise a great influence on the course of trade and on the growth of our towns. The influence of the railroads already built, on San Francisco, has been so injurious that it has attracted attention throughout the civilized world. It was not a little temporary check, confined

to a few branches of business, but has extended to the whole city, and has now continued for two years, with no prospect of improvement for a couple of years more, and none that we can see even after the lapse of that period.

DECLINE IN THE VALUE OF LAND.

The market value of the real estate of San Francisco was \$200,000,000 in May, 1869; and the depreciation since then, has been, at our estimate, about \$40,000,000, or 20 per cent. This decline is mainly due to the fact that the people have lost their confidence in the future of the place: they are afraid the railroads have destroyed its commercial position; and the lack of confidence increases as time passes. The money already lost by the decline would have been sufficient to build railroads from San Francisco to Vallejo by way of Sausalito and Oakland; and though the decline has not yet come to an end, the capitalists still make no move.

There is room for difference of opinion in regard to the total decline in the value of San Francisco real estate within the last two years, and the real estate dealers there, who are best qualified to express a correct opinion, are also interested to conceal the facts, for publicity tends to scare purchasers and reduce the number of transactions. Several of them, however, with whom we have conversed confidentially, think the depreciation since May, 1869, is not less than \$50,000,000. Others, no doubt, would put the figures much less.

The chief decline in valuation has been in the outside or remote lands, and in many cases it has been as much as 75 per cent. Some of the inside property has declined from 10 to 25 per cent., and there are a few places where, on account of changes in the course of business, and the construction of railroads or public buildings, prices have advanced. As an instance of the decline, we quote the following passage from a San Francisco letter to an interior paper, published in October, 1869:

We have overdone the real estate and homestead business, hundreds of incorporations having been put upon the market to sell off lots within a radius of ten or fifteen miles of the city, most of which are selling, when sales can be made at all, at a discount of 25 to 75 per cent., and many homestead shares having been forfeited in preference to paying the enormous prices that these corporations put their stock in market at. To show the depreciation in price of what is known as our outside lands, take for example the Great Park Homestead. They put their shares on the market some six months ago at \$230 per share for a lot of 25x120 or thereabout, and they went off quite readily at that figure. About a week ago some 600 lots were sold by auction, in quantities to suit, and 40 feet frontage by about 120 deep, in the immediate vicinity, at from \$25 to \$35 per lot.

One of the most signal instances of decline is in the land of the South San Francisco Dock Company, which owns several hundred acres of water lots at Hunter's Point, the best unoccupied water front, and if the city were destined to grow rapidly, the most desirable for speculative investment. This land rose in value from 1865 to 1869 at the rate of about three per cent. per month, and for the last two years has fallen at about the same ratio. We are told that the decline in real estate was due to over-speculation, but when we look back we find that the real estate sales were greater in the first half of 1867, when the rails had not reached the summit of the Sierra at the western end, nor half-way to the summit of the Rocky Mountains at the eastern, and when the completion of the railroad across the continent was generally supposed to be remote if not doubtful; so remote that its influence was not felt in the real estate market of San Francisco. Upon that point we speak from personal knowledge.

The land speculation of 1869 was excessive mainly because the completion of the railroad was an injury and not a benefit to San Francisco; and the present depression is due largely to an opinion that the city never again will grow as it did from 1860 to 1869, and that much of the business now done here will be transferred to some other place as soon as facilities for transacting it are provided. If the Pacific Railroad had added 20 per cent. to the value of San Francisco instead of taking away 20 per cent. from it, and if there were to be a steady increase, we should not say now that the people there overdid land speculation in 1868.

DECREASE IN LAND SALES.

Another significant evidence of the seriousness of the back-set, is found in the amount of the sales of real estate in San Francisco. These amounted to

\$ 3,000,000 in 1866; \$17,000,000 in 1867; \$27,000,000 in 1868; \$29,000,000 in 1869, and \$15,000,000 in 1870. The average monthly sales were \$1,497,000 in the first and \$1,442,000 in the second half of 1867; \$2,304,000 in the first and \$2,260,000 in the second half of 1868; \$3,490,000 in the first and \$1,489,000 in the second half of 1869; \$1,457,000 in the first and \$1,147,000 in the second half of 1870; and \$1,39,000 in the first half of 1871. From the first half of 1869 to the first half of 1871 there was a decline of 70 per cent. The sales in June, 1871, were only \$678,000, less than those of any other month since 1865.

The amount of sales in 1871 may seem very large to people in the old cities, where land speculation is not a prominent branch of business, but we see that less is being done in San Francisco now than five years ago, in which interval about 5,000 houses have been built and 30,000 inhabitants have been added to the population. At first the decline in real estate was attributed to a stringency in the money market, but such stringency as was observed was confined mainly to dealers in real estate who found themselves growing poor instead of rich. Money is abundant now, and our banks get about the same rates for loans as those charged by banks in Chicago and New York. The San Francisco Bulletin of January 10, 1871, in its financial review for the year 1870 says: "The supply of money has been generally in excess of the demand, notwithstanding a slight modification of the rates of interest, while at no time has there been a real stringency."

LOSS OF SHIPPING.

If we examine the shipping statistics we find that the vessels arriving from American ports on the Atlantic, in San Francisco aggregated 119,000 tons in 1862, and 114,000, 131,000, 158,000, and 83,000 year by year down to and including 1870; and the vessels leaving San Francisco for American ports on the Atlantic, measured for the same years 23,000, 16,000, 21,000, 27,000, 32,000, 43,000, 53,000, 24,000 and 11,000 respectively. The inferiority of the departures to arrivals is due to the fact that the American vessels go home by way of Peru, China and England. We perceive here that fewer ships arrived from and departed to American Atlantic ports in 1870 than in any year since 1862. The San Francisco Commercial Herald in its annual review comparing the figures of 1870 with those of the previous year, says: "It will be seen that there is a decrease of 55 per cent. in the number of departures for domestic Atlantic ports, caused by the fact that the Pacific Railroad is doing a share of the trade previously passing around the Horn." Before 1870 the California Steam Navigation Company paid \$2,000 per month for the use of Broadway wharf, but in that year, in consequence of the decrease of business, the Harbor Commissioners reduced the rent to 1,000. These figures are full of meaning. Probably no city in the United States has so large a proportion of empty houses. The Federal census, taken in June, 1871, found 2,603 empty houses, and the number is now larger and is estimated at 3,000. The total number of houses, according to the census figures, is 25,266, but according to the City Directory is 18,659. The former number probably includes sheds and outhouses; but assuming that it is correct, it implies that one-eighth of the houses are unoccupied; if the latter figure is correct, one-sixth are unoccupied.

THE RAILROAD SYSTEM OF CALIFORNIA.

The railroad system of California is new, having been commenced, it may be said, in 1868, previous to which time there was no access to deep water by rail and no long line of rail communication anywhere. It is as yet far from completion, but it already exercises great influence and is rapidly extending. It has two main divisions—the Central Pacific and the California Pacific.

THE CENTRAL PACIFIC.

The Central Pacific as part of the California railroad system consists of the following roads:

1. The original or main trunk Central Pacific, from Sacramento to the State line, 133 miles. The company runs the line to Ogden, 743 miles from Sacramento,

and the road gives communication with the great railroad system of the Eastern States.

2. The Western Pacific, from Oakland to Sacramento, 135 miles.
3. The San Jose branch of the Western Pacific, from Niles to San Jose, 18 miles.
4. The Alameda branch of the Central Pacific, 6 miles.
5. The San Joaquin Valley Railroad, finished 20 miles, from Lathrop to Modesto, and projected 300 miles to Visalia.
6. The California and Oregon Railroad, finished 105 miles, from Roseville, on the Central Pacific main trunk, to Selma, on the Sacramento river, and projected 227 miles further to the Oregon line.
7. The Sacramento Valley Railroad, from Sacramento to Folsom, 20 miles.
8. The El Dorado road, from Folsom to Shingle Springs, 25 miles.
9. An air line road from Sacramento to Oakland, 80 miles.

Thus the lines of the Central Pacific Company in California measure 641 miles of completed and 982 of projected road. The business of the Central Pacific Railroad Company is managed with much secrecy, but it is generally supposed that the stock is nearly all held by Leland Stanford, Charles Crocker, C. P. Huntington, Mark Hopkins and E. B. Crocker.

The Southern Pacific Railroad Company has 80 miles of railroad finished, from San Francisco to Gilroy, and proposes to build 640 more, from Gilroy to Fort Mojave, on the Colorado river. It also proposes to build a branch of 324 miles from Tehachepe Pass by way of Los Angeles, to Fort Yuma, and another branch of 45 miles from Gilroy to Salinas. The Directors of the Company are Lloyd Tevis, Leland Stanford, Charles Crocker, C. P. Huntington, Mark Hopkins, Charles Mayne and Peter Donahue, the same persons having a majority in this Board and in the Central Pacific.

THE PROPOSED AIR LINE.

The surveys for the projected air line road from Sacramento to Oakland were commenced in September last, are not yet completed, and the surveyors have not yet determined whether they shall recommend the crossing of the outlet of the Sacramento basin at the Straits of Carquinez or at the head of Suisun Bay. In any case there must be two bridges—one over the Sacramento river, near Sacramento, and the other over the united waters of the Sacramento and San Joaquin. The Railroad Gazetteer, published in the interest of the Central Pacific Railroad Company, at Sacramento, in its number for last November said:

In the prosecution of the survey thus far, it has been ascertained that the idea heretofore entertained that it is impracticable to build a road across tule lands, without incurring enormous expense, is a mistaken one. It is found that at a depth of a few feet below the mud and ooze of the marshes, there is a solid sub-stratum of clay, which will afford a firm foundation. * * The second survey, now in progress, is on a line crossing the Sacramento river three and a half miles below the city and running thence in a direct line near Prairietown to Van Sickle's and Chip's Islands, at the head of Suisun Bay. Crossing the arm of the Bay at that point by a draw-bridge, it continues by the most direct route to Oakland.

Benicia would be the better place to cross, because the banks are high there and steamers and small sailing vessels could easily pass under the bridge whether it had a draw or not; and if the crossing should be fixed there the Sacramento river could be passed immediately at that town, perhaps on the railroad bridge of the California Pacific Company; and by this policy two obstructions to the navigation of the Sacramento river and one to the navigation of the San Joaquin would be avoided. It is to be observed that a considerable part of the trade of Sacramento and Stockton is done with sloops and schooners, which find great difficulty in passing draw bridges—so the commerce of both places would suffer from a low bridge across the Sacramento-San Joaquin at Chip's Island.

We do not believe that the proposed air line from Sacramento to Oakland will ever be built. By its bridges it would injure Sacramento and Stockton; it would be very costly; it would command very little way trade; it would pass by Benicia, which is excellently situated for terminal purposes, to reach Oakland, where there is no permanent terminus, and where no secure anchorage can be provided until after years of waiting and the expenditure of millions. So far as we can learn, the Central Pacific Company have never taken any engineering advice upon the grave

question whether Oakland, Benicia or Vallejo is better adapted for a deep water terminus for their system of railroads. This is a question of vast importance to them and to the State, and it cannot be considered settled until after a careful study by eminent engineers.

THE CALIFORNIA PACIFIC.

The roads of the California Pacific Railroad Company are the following:

1. The Sacramento and Vallejo (main trunk) line, 60 miles.
2. The branch from Davisville to Marysville, 45 miles.
3. The Napa branch from Adelante to Calistoga, 35 miles.
4. The Bloomfield branch, 16 miles, projected.
5. The Sonoma branch, 40 miles completed, 23 in the course of construction and 50 more projected.
6. The Oregon branch, from Woodland to Christmas Lake, by way of Tehama, 400 miles, projected.
7. The Salt Lake branch, from Christmas Lake to Salt Lake, 550 miles, projected.

The aggregate is 1155 miles of road completed, 23 in course of construction and 1016 projected.

PURCHASE OF STEAMBOATS.

The California Pacific Railroad Company have bought out the property of the California Steam Navigation Company, including 11 side-wheel steamers, 13 stern-wheel steamers and 40 barges. The barges are used for transporting wheat and freight; the stern-wheel steamers are to run on the upper Sacramento and San Joaquin and on the smaller estuaries; the side-wheel steamers will run to Vallejo, Sacramento, Stockton and other large places.

The Steam Navigation Company was organized in 1854 by a combination of the owners of all the steamers running in the inland waters of the State, and it immediately took exclusive control of all the means of transporting passengers and valuable or quick freight from San Francisco to the interior. For fifteen years it maintained its monopoly, though it had often to contend with opposition, which, however, never lasted long. If the rival boats were not bought off, they ran ashore, took fire, bursted a boiler, or got into trouble some other way. The company was one of the wealthiest and most influential in the State, and as late as 1868 every steamer engaged in the inland traffic of California was either owned by it, or in some other way subject to its control. When the California Pacific Railroad Company wanted to buy a steamer in that year fit to run to Vallejo, they could not get one in the State, though a number belonging to the California Steam Navigation Company were lying idle, and when they bought the "New World" at Puget Sound, brought her down here and put her in use, the Oregon Steam Navigation Company applied for an injunction to stop her, on the ground that that company had bought her from the California Steam Navigation Company under a contract that she never should ply in the waters of this State without the consent of the latter association. The Oregon Company sold the "New World" to run on Puget Sound under the same condition, but the purchaser failed, and the steamer, under an unconditional Sheriff's sale, passed into the possession of the railroad company. The injunction was refused. We mention these facts to show what a far-reaching institution this California Steam Navigation Company was. At one time it owned most of the ocean steamers plying on the coast between San Diego and Victoria. When the construction of the railroad from Vallejo to Sacramento was under way, rumors were frequent that the Steam Navigation Company had bought or would buy it up. Now the railroad is so strong that it buys up the steamboats.

So long as there were no railroads, the Steam Navigation Company was mighty, but when the iron tracks were laid down connecting Sacramento, Stockton and Marysville with deep water, it became weak, and the sale of its property is one of the signs of the times—a sign that the railroad has become mightier than the steamboat in the inland traffic of California. The Steamboat Company was a San Francisco organization; its stockholders and its interests were fixed in the peninsular city, and all its influence has been used to enrich that place. The purchasing company have their chief interest at Vallejo, will keep their idle boats there, do their repairing there, and make that a preferred terminus.

THE TWO GREAT COMPANIES.

Each of these two companies, the Central Pacific and the California Pacific, possesses an immense capital and great influence in financial circles. The Central Pacific has more miles of finished road, and holds immense subsidies to be given on the completion of additional roads; but the California Pacific has more wealth outside of railroad property. The Alta California, speaking in January of the election of a new Board of Directors of this company, says:

Edward H. Green, who stood first on the successful ticket, is an eminent capitalist of London, one of the Directors of the Bank of England, and Vice President of the London and San Francisco Bank. Rudolph Sulzbach and Julius May, of Frankfort-on-the-Main, are brothers-in-law, and they rank next to the Rothschilds among the financiers of Germany. M. K. Jessup is a leading capitalist and railroad operator of New York. With them are associated F. D. Atherton, John Parrott, Eugene L. Sullivan, J. P. Jackson and M. S. Latham, of San Francisco.

Californians need no information about the wealth and business standing of the San Francisco Directors, who, it is said, however, are merely the representatives of foreign capital. Mr. Parrott has resigned and been replaced by R. P. Hammond as a member of the Board of Directors.

The proposed roads to Oregon and Salt Lake are to be built by the "California Pacific Railroad Eastern Extension Company," which was organized on the 22d of May, 1871. The routes are thus described in the certificate of incorporation:

Commencing at a point at or near the town of Davisville, county of Yolo, State of California: thence northerly through the Sacramento valley, and thence in a northeasterly direction, crossing the northern boundary of California at a point near Goose Lake to a point near Christmas Lakes, in the State of Oregon; thence easterly through the State of Oregon, the Territory of Idaho and the Territory of Utah, to Ogden City, in Utah. Also, from a point on the first named route in the bend of Pitt river, near the forty-first parallel of latitude, northwesterly to a junction in the State of Oregon with the railroad of the Oregon and California Railroad Company. Also, from a point on the first named route, near Christmas Lakes, westerly to a junction of the railroad of the Oregon and California Railroad Company at or near Lower Klamath Lake, in the State of Oregon—in all, nine hundred and forty-three miles of railroad, or thereabout.

The following is a list of the corporators:

<i>Names.</i>	<i>Residence</i>	<i>No. of Shares.</i>
William F. Roelofson.....	San Francisco.....	900,000
Milton S. Latham.....	San Francisco.....	18,000
Isaac Friedlander.....	San Francisco.....	18,000
Richard P. Hammond.....	San Francisco.....	18,000
A. Gansl.....	San Francisco.....	18,000
Eugene L. Sullivan.....	San Francisco.....	18,000
F. D. Atherton.....	San Francisco.....	18,000
J. P. Jackson.....	San Francisco.....	18,000
John B. Frisbie.....	Vallejo.....	18,000
Alexander De Laski.....	London, England.....	18,000
William H. Tillinghast.....	San Francisco.....	18,000
Edward H. Green, by his attorney in fact, Milton S. Latham.....	London.....	18,000
Rudolf Sulzbach, by his attorney in fact, Milton S. Latham.....	Frankfort-on-the-Main.....	24,000
Julius May, by his attorney in fact, Milton S. Latham.....	Frankfort-on-the-Main.....	18,000

MINOR ROADS.

Besides the roads of these two great companies, the State has the Northern California Road, 26 miles long, from Marysville to Oroville; the Los Angeles Road, 19 miles, from Los Angeles to Wilmington; the Stockton and Copperopolis Road, 28 miles, in running order, and the Texas Pacific Road, projected.

SAN FRANCISCO'S ADMISSIONS.

If San Francisco cannot be the chief railway terminus of California she cannot keep her place as the chief city, and that she cannot be the chief terminus her capitalists have admitted, not under seal nor in express terms, but impliedly and unmistakeably. Though California has 900 miles of railroad, though two years have elapsed since the Middle Pacific Railroad was finished between the

Sacramento and Missouri rivers; though nearly two years and a half have passed since the California Pacific Road was finished from Vallejo to Sacramento, yet San Francisco is still isolated on her peninsula and visited only by two little trains daily from the village of Gilroy. Though Vallejo and Oakland have set up an open competition for the foreign trade, the metropolis has made no effort or spent no money to build a road from Vallejo to Oakland or a bridge from Oakland to San Francisco. The city by its influence has induced the State to give 60 acres of mud flat in Mission Cove for a terminal station for the Central and Southern Pacific Railroads, which have not yet used it or commenced work to establish a terminus there.

The San Francisco press has urged the construction of a road from Vallejo to Oakland, and of a bridge from the latter place across the bay, but nothing has been done, nor is there a probability that anything will be done soon. There are very serious obstacles in the way. A bridge across Carquinez Strait high enough to permit ships to pass under it would be very expensive, and as the California Pacific Railroad (the interests of which are attached to Vallejo) would not permit trains to run from their track, the value of a road to Oakland would be very doubtful.

NO BRIDGES ACROSS THE BAY.

A bridge across San Francisco bay would obstruct navigation, and would probably never be allowed by Congress. Permission would have to be obtained before any work could be done and no attempt has yet been made to get such permission. The expense would be great, as the distance across at the narrowest place near San Francisco is four miles, including one mile over 50 feet deep at low tide. Besides the construction of such a bridge, by enabling the cars to enter the city would reduce the time of transit from an hour to twenty minutes; would reduce the fare; would multiply the trips, and give other facilities to people engaged in business in San Francisco, to reside in Oakland, where the land fit for residences can be got 75 per cent. cheaper in almost unlimited quantities, and of course, the result would be that in the districts occupied for dwellings in San Francisco, valuations would fall 50 per cent. or more. The construction of the bridge would not in any respect weaken the superior advantages of Oakland as compared with San Francisco, and would hasten the improvement of a deep harbor to attract trade there. Whatever the reasons, San Francisco is reached by ferry boats, and the trade is gradually slipping away.

NO SAN FRANCISCO MONEY IN RAILROADS.

The unfitness of San Francisco for the transaction of railroad business is implied by the fact that her capitalists in a class refuse and have steadily refused to build railroads in any part of the State with their private funds. If they could bring the railroads into the city, and thus increase the value of their lots, they would of course subscribe. There have been a few exceptional cases, in which San Francisco capitalists have given their private funds to build railroads, but they are so few that they can be counted on the fingers of one hand, and it is doubtful whether the total amount would exceed \$1,000,000; and in most cases the small sums were not given until the public treasury had contributed still more. Thus we remember that after San Francisco, San Mateo and Santa Clara had subscribed \$12,000 in bonds per mile to the San Jose Railroad, then certain public spirited citizens of San Francisco consented to take the gift and add a little more to it in the construction of a road. The Petaluma and Napa Valley roads were constructed on the same principle, though the amount from the county treasury was \$5,000 per mile in one case and \$10,000 in another.

It may be said that the liberal subsidies given by the Federal, State, county and city treasuries have relieved the citizens from the obligation of making private subscriptions. This defense, however, will not bear critical examination, for we find that the rich men of San Francisco have been bitterly opposed to the donation of money to any railroad save that to Gilroy, the only one that enters the city; and that as a class they have not sought to encourage the construction of railroads in the interior of the State.

SAN FRANCISCO HAS NO RAILROADS.

It is especially worthy of note that the two main railroad systems of California—the Central Pacific, terminating at Oakland, and the California Pacific, terminating at Vallejo—were organized in the interior; that they have never been controlled by San Francisco capitalists; that they were built in the face of the opposition of San Francisco; that no resident of or large land holder in San Francisco has ever been a Director in the Central Pacific Company; that no person has become a Director of the California Pacific Road with the idea of increasing the trade of San Francisco or the value of real estate there; and that no San Franciscan has become a Director in the California Pacific Railroad except as the representative of foreign capital.

Another very significant fact, implying an admission that San Francisco capitalists have given up their hope of making their place the main terminus in the State, is that the ownership of all the steamboats running from San Francisco to Oakland, Sacramento, Stockton, Vallejo and Red Bluff vests in companies whose chief interests lie in Vallejo and Oakland. The inland transportation would never have passed out of the hands of San Francisco men if they could have made the most profit from it; and the Central and California Pacific companies would not have preferred Oakland and Vallejo if they had not seen more profit there. The refusal of San Francisco capitalists to put their money into railroads is explicable only on the theory that they do not see that they can expect any fair return for it; they do not see that they could make a terminus there, and they do not believe that they could fix the trade so as to attract population and increase the value of their land, which last forms a large share of their wealth and is a favorite object of speculation with them. If they could make their place the exclusive deep water terminus of the railroad system of the State, it would be gross folly in them to withhold their money from railroads, and entirely inconsistent with the principles that actuate them in their general business.

GOVERNMENT AID TO RAILROADS—THE MAIN CENTRAL PACIFIC.

Of the original Central Pacific Railroad 138 miles are in California, reaching from Sacramento to the State line. To assist the construction of this section, Congress gave 903,200 acres of land worth \$2.50 per acre on an average, loaned \$6,192,000 in bonds for a period of thirty years, and gave a roadway 200 feet wide for more than 100 miles over the Federal lands. The State has given and promised to give \$105,000 annually for twenty years, or \$2,100,000. San Francisco has given \$400,000 in 7 per cent. bonds, to run thirty years, and the aggregate principal and interest will be \$1,240,000. Sacramento subscribed \$300,000 in 8 per cent. bonds, to run thirty years, thus promising to pay in all \$1,020,000. Placer county subscribed \$250,000 in 8 per cent. bonds, to run twenty years, making a total of \$650,000.

LOAN OF FEDERAL BONDS.

The Federal bonds bear 6 per cent. annual interest, which is paid by the Government, but is to be paid with principal by the Railroad Company at the end of thirty years, with deductions for all the freight and passengers carried by the road for the Government. If, however, the charges of the railroad amounts to more than three per cent. (half the interest) the Government must pay the excess in cash. Thus the railroad has the use of \$6,192,000 for thirty years without paying any cash in that entire term. The railroad would rather pay 3 per cent. in transportation than 2 in cash; and as the current rate of interest in California is 10 per cent. per annum, the loan is worth as much to the company as a gratuitous loan of 8 per cent. on \$6,192,000 (or \$495,360) every year for thirty years. That sum of \$495,360 deposited in bank every year, and bearing 10 per cent. interest compounding annually, would amount in thirty years to the immense sum of \$74,000,000; whereas the entire principal and interest of the bonds will be only \$8,337,000, leaving \$65,000,000 profit to the company. If, instead of reckoning the interest at 10 per cent. we allow but 8, and take 6 per cent. on the \$6,192,000, or \$371,520 as the amount annually loaned every year without interest for thirty years, and compound annually, we shall get \$42,388,775 as the total result, leaving

\$34,000,000 net, after paying the interest and principal of the bonds. We do not imagine the company will make either thirty-four or sixty-five millions profit out of the loan, but the banks and professional money-lenders in San Francisco are doing better, generally receiving five-sixths of one per cent. a month (10 per cent. annually) but compounding monthly; and we have no doubt that if the Government would invite bids for such a loan of bonds, a combination of capitalists in San Francisco could be found to agree to pay \$10,000,000 at the end of thirty years in addition to the principal and interest, and furnish large security. The sum which the loan would bring on the market is the sum at which it should be charged to the railroad company.

For 138 miles of road, between Sacramento and the State line, the public have given or promised to pay \$6,010,000 in money, \$2,250,000 in land and \$10,000,000 in bonds, or \$18,268,000 in all, an average of \$132,000 per mile! Some deductions should be made from this for the discount on the Federal and county bonds, but we have no precise information as to the amount, and the deductions are probably not more than those on greenbacks, so we can consider the above terms as currency, though the people will have to pay all of them in gold.

CENTRAL PACIFIC BRANCHES.

To the Western Pacific Railroad 126 miles long, the United States loaned \$2,016,000 in bonds for a period of thirty years; gave 801,400 acres of land worth \$2.50 per acre on an average, and the right of way 200 feet wide over Federal land. The State gave the right of way over State land and 30 acres in Mission Bay, worth \$250,000 at the time of donation. San Francisco gave \$250,000 in 7 per cent. thirty year bonds, which with interest will amount to \$775,000. Santa Clara subscribed \$150,000 in 7 per cent. twenty year bonds, making with interest \$465,000. San Joaquin county subscribed \$250,000 in 8 per cent. twenty year bonds, making \$650,000 with the interest; and Oakland gave 500 acres of water front, valued at \$500,000. The gifts and advances, exclusive of the Federal bonds, amounted to \$1,543,500; the Federal bond loan on the basis calculated above was worth about \$3,500,000, making a total of \$8,043,000, or \$63,000 per mile.

San Francisco gave \$300,000, San Mateo gave \$100,000 and Santa Clara \$200,000 of 7 per cent. fifteen year bonds for equal amounts of stock in the San Francisco and San Jose railroad. The interest and principal on these bonds will amount to \$1,230,000.

To the California and Oregon Railroad, Congress has given 12,800 acres per mile, 3,904,000 acres in all, worth about \$2,000,000, or \$6,400 per mile.

To the California Central Railroad Yuba county was authorized in 1862 to subscribe \$100,000 on conditions to be fixed by the Supervisors. At 8 per cent. for twenty years the total principal and interest would be \$200,000. In the same year Placer was authorized to subscribe \$100,000 of 8 per cent. twenty year bonds to the Sacramento, Placer and Nevada Railroad. Total principal and interest \$260,000.

To the Southern Pacific Railroad of California, from San Jose to Fort Mojave, and from Tehachepe to Fort Yuma, by way of Los Angeles, Congress has given 12,000 acres per mile for 875 miles, 11,200,000 acres in all, worth \$4,200,000. The State has given 30 acres in Mission Bay, worth \$250,000. San Francisco has given 3,000 shares of stock in the San Francisco and San Jose railroad, worth at the time of transfer \$120,000. As this stock had been paid for in bonds previously counted, we leave this item out of our total donation to the Southern Pacific Railroad of \$4,500,000, equivalent to about \$6,000 per mile.

To the El Dorado road 26 miles long, from Folsom to Shingle Springs, El Dorado county subscribed \$200,000 and Placerville \$100,000 in 10 per cent. fifteen year bonds, calling for \$750,000 of principal and interest together.

All the above roads are now in the hands of the Central Pacific Company, and the following are the total subsidies:

Original Central,	\$18,268,000
Western Pacific,	8,043,000
Southern Pacific,	1,230,000
California and Oregon,	2,000,000
El Dorado,	750,000
California Central,	260,000
Sacramento, Placer and Nevada,	260,000
Total,	\$37,261,000

The city of Sacramento gave part of her water front to the Central Pacific Railroad Company, but we have no estimate of its value.

TO OTHER ROADS.

To the Texas Pacific Railroad Congress has given 12,500 acres per mile, in all, 2,210,000 acres in California, worth, at a very liberal estimate, \$500,000.

To the Stockton and Copperopolis Railroad Congress has given 250,000 acres, worth, probably, \$1,000,000.

Sonoma county has promised, under an Act of the Legislature, to give \$350,000 in bonds, which, with the interest, will amount to \$910,000 for roads within its limits, and about \$100,000 of these bonds have been issued.

The following counties and towns have issued railroad bonds as follows:

	Year.	Principal.	Total.
Los Angeles County, - - - - -	1870	\$150,000	\$375,000
Los Angeles City, - - - - -	1870	75,000	187,000
Napa, - - - - -		300,000	840,000
Yuba, - - - - -	1857	100,000	220,000
Butte, - - - - -	1863	63,000	198,000
Solano, - - - - -	1859	100,000	170,000
San Joaquin County, - - - - -	1870	200,000	480,000
Stockton, - - - - -	1870	300,000	720,000

Yuba was authorized in 1857 to issue \$200,000 to a road to Vallejo, but has issued only \$100,000 and will not issue the remainder.

Solano was authorized to issue \$200,000 in 1869, but we believe has issued only \$100,000; principal and interest amounts to \$170,000, and will not issue any more. Yolo, Sutter, Stanislaus, Calaveras and Plumas have at various times been authorized to subscribe to railroads, but we believe never issued any railroad bonds.

The Sacramento Valley Road, twenty miles from Sacramento to Folsom, the roads from Niles to Oakland and Alameda, about thirty miles, have been built without Government assistance. The money obtained from the Yuba bonds given to aid the road from Marysville to Vallejo, was spent ten years before any iron went down, and in such a manner that it contributed very little to the expense of building the road; and the bonds issued by Napa and Sonoma went into the hands of other companies, though the California Pacific has since bought their roads.

SUMMARY.

The quotations partly delivered and partly promised may be summarized thus :

Central Pacific, - - - - -	\$37,261,000
California Pacific, - - - - -	2,140,000
Stockton and Copperopolis, - - - - -	1,000,000
Texas Pacific, - - - - -	500,000
Los Angeles, - - - - -	582,000
Northern California, - - - - -	198,000
Stockton and Visalia, - - - - -	1,200,000
Total, - - - - -	\$42,881,000

Many minor gifts, making a considerable total, might be added. Against all this we may venture to assert that San Francisco has furnished not more than one million dollars of private capital towards the construction of railroads in the State, and this sum was furnished only to roads which had previously obtained public subsidies of not less than \$5,000 per mile. San Francisco has built no roads with her private funds, or with foreign capital brought to the State by her influence. The railroads of the Central Pacific Company have been built mainly with the proceeds of Government subsidies; and the railroads of the California Pacific Railroad Company have been built mainly with foreign capital, brought to the State by the influence of Vallejo.

The debts mentioned above were incurred under special Acts, but a general Act, passed in 1870, provides that any county may incur a debt to assist a railroad company, subject to the condition that the total debts for railroad aid shall not at any time exceed five per cent. of the taxable property. The bonds, if issued, are to bear 7 per cent. interest, and run 20 years. This general act exposes the people

of the State to the possibility of having to pay about \$20,000,000 within 20 years.

THE ANALOGY OF NEW YORK.

The main defense of the advocates of San Francisco is that no large city has been seriously injured by railroads; that New York, which is on an island and has a situation similar to that of San Francisco, has not been injured by them; that Jersey City which has a situation like that of Oakland has not taken any of the foreign trade; and that Piermont, 30 miles above New York on the bank of the Hudson and situated like Vallejo, is a place of no note, though a wealthy railroad company attempted to make its terminus there.

NEW YORK NOT AN ANALOGUE OF SAN FRANCISCO.

To this we answer that no large city in Europe has a site so disadvantageous as that of San Francisco, nor has any other city a position enough like it to furnish the basis for a trustworthy argument. The fact that she has been seriously injured indicates a difference. The assumption that New York, Jersey City and Piermont are the counterparts of San Francisco, Oakland and Vallejo is grossly incorrect. If we take the coast survey charts and topographical maps of the Atlantic Coast of America, and search for the best place for a commercial city, with a deep and well sheltered harbor, convenient access from the sea, a fine level upland site coming down very near to a long and deep water front, with convenient channels for trade leading inland and near the center of wealth and population, Manhattan Island would inevitably be selected as the spot. If every wharf, every warehouse and every convenience of commerce should be destroyed next month at all the points that have aspired to be commercial cities on that coast, the metropolis would again arise at the same spot; just as Vallejo would be selected on the coast of California. Railroads are less important, relatively, on the Eastern coast than here. The Eastern slope of the Alleghanies has 16,000,000 inhabitants who do a large part of their trading with the metropolis by steamers and sailing vessels; and the coasting tonnage of New York is relatively ten times as large as that of San Francisco.

THE FUTURE OF JERSEY CITY.

Jersey City, which is compared to Oakland, has no navigable estuary fit for conversion into a fine harbor, no fine upland site for a city, and no land communication by short route with the 3,500,000 people in New England. Yet with all these disadvantages, Jersey City may yet become a formidable rival of New York. The New York World of March 16th, 1869, says:

This city is at last threatened with a formidable rival. Across the river what is now Hudson county, in New Jersey, is asking to be a city extending from Bergen Point to Bull's Ferry, from the Hudson to the Hackensack; and including all the territory within these limits, it proposes merging into a grand metropolis Jersey City, Hoboken, Weehawken, Hudson City, Bergen, Union City, Guttenburg, Bull's Ferry, Communnipaw and other places, about twenty in all, including a population of 120,000. This is more than mere talk. Rumor already fixes a name for our rival; it is to be "New Jersey City." So great an enterprise ought to be christened, and with a more original name; but with the magnificent water front, the location, the facilities and inducements, New Jersey City or some other city is sure to spring up on the shore opposite to New York, and New York should look to it that other and vaster interests do not follow the Erie road and the steamship and other enterprises which are now centering on that side of the Hudson.

A meeting of thirty leading down-town business men and property owners of New York city was held on the 16th of June, 1871, and their proceedings were reported in the New York Tribune of the next morning. Their purpose was to consider the projected construction of the Viaduct Railroad. H. G. Gardner spoke as follows:

The question was one which deeply affected the interests of New York City. During the past ten years the city has lost more than half of what it should have gained, both in population and commercial prosperity. From 1800 to 1860 the increase in population was at the rate of twenty-eight per cent. every five years, or in other words, it doubled in every fifteen years. Thus, in 1870, had it continued to increase at the same rate, the population would have amounted to 1,334,073; but, instead, it was only 942,000, or an increase of only 112,000, when it should have been over 400,000. The reason for this is that there is no adequate means of communication from the lower to the upper portion of the island. * * * It is necessary for the permanent success of a city that there should be some means for the passage of through and the distribution of way freight. In this city the through freight should go by means of roads built on the bulkheads which are to be constructed, but the other should go by the road we are now considering. It is the only way in which we can retain our trade, as under the present arrangement, each ton of freight is taxed \$5, as it passes through our city, for cartage and handling. Thus we have lost one proportionate gain of trade, and Philadelphia has quadrupled

lefts, while the merchants of Baltimore are building warehouses on the water front to meet the demands of the Western trade, which they boldly assert is leaving New York for their city. How are we to remedy this? for if it be true that the city has lost collectively, it must be equally true that each of you have lost individually a proportionate amount of what you would have had; and can we expect to compete with other cities when it would cost more to truck goods through over-crowded streets from the depot to the warehouses or the docks than to transport them from Buffalo, and in some cases even from Chicago? The remedy consists in having the warehouses on the docks, and the railroads coming directly to them, so that by means of machinery the goods can be transhipped at little or no cost. Every inch you have to truck them costs heavily, and we have the means, if we avail ourselves of them, of handling goods cheaper than any one else in the country. Statistics show that during the last year our exports decreased by 900,000 tons, or more than our entire commerce was twenty years ago, and this because we taxed goods \$5 per ton. Wait until the Hoosac Tunnel is completed, or the railroad that our Chairman is building from the West to the Chesapeake is finished, and if you have not corrected the present abuses, then good-bye to the trade of New York. Many people think that because New York is so large, and has so many connections with the West, there is no possibility of her declining, but seventy years ago Philadelphia had a larger trade than New York, and it was only the building of the Erie Canal that made the change. Now, when you put a tax at the end of the route, you will find that men will ship their goods to some other place, where they can do it cheaper. A Western man stated at the Canal Convention, last Spring, that he knew of 4,000,000 bushels of wheat which were not shipped to our port because the business could be done at 4½ cents per bushel cheaper at another place. And so it will be always. Farmers in the West may be very well pleased with the way you do the business, but unless you can contrive some plan to save their money, they will not stay with you.

A. A. Low said that his experience in China had taught him that where business was done cheapest, there it would go. House lots might sell very high, but that was no criterion that trade was flourishing. Indeed, the fact of such high prices, and consequently high rents, was the very reason why there was danger, unless something was done to obviate it, that the trade of the port would leave it. It was necessary, therefore, to find some way in which coarse freight could be handled with economy, and this railroad seemed to be the only solution.

The general sentiment of the meeting seemed to be that the commerce of New York would be seriously endangered if additional facilities were not supplied. If New York is not secure, why should San Francisco be?

Previous to 1820 Philadelphia was about the centre of the population of the United States, and was also the chief commercial city; but the construction of the Erie Canal opened a cheap road to the lake basin, and then New York, which had a far superior harbor—deeper, nearer to the sea, and not so often obstructed by ice—became the centre of population and the chief city.

THE ERIE CANAL AND NEW YORK.

In a report submitted to the New York Produce Exchange on the 24th March, 1869, Mr. Hatch, on behalf of a committee appointed previously, said the Erie Canal carried in six months (it is closed by ice nearly half the year) as large a tonnage of freight from West to East as the five chief trunk railroads during the whole year. The average cost by rail from Chicago to New York is \$14.31 per ton, and by canal, lake and river, \$7.66, showing a saving of \$6.55 by the latter conveyance on each ton. Mr. Hatch added that the canals should be fostered, for "we have reached a crisis in our manner of dealing with the canal system which if even wisely met would insure New York the commercial supremacy not only of the continent but of the world." At a meeting of the New York State Commercial Union, held in New York city on the 31st of March, 1871, Peter Cooper said "the commercial supremacy can only be maintained by a cheap and rapid passage of freight on the Erie Canal." These declarations were not questioned in the meetings where they were made, nor by the newspapers that gave them publicity. They imply that New York is in danger, and that she depends to a large degree for her prosperity upon what may be called an inland coasting trade. In corroboration of the opinions of Hatch and Cooper in regard to the importance of the Erie Canal to New York, we find that the Canadians have undertaken extensive ship canals, for the purpose of taking trade from New York, placing far more reliance upon them than upon railroads, and expecting to find more competition from the Erie Canal than from the New York railroads. If the Erie Canal had been bought out by the railroads the situation of New York would be similar to that of San Francisco, which has sold out its steamboats to the California railroad companies.

CHICAGO'S GREATNESS.

Chicago became great by virtue of the advantages of her situation. She was at the head of navigation of the lakes; she had a secure though narrow harbor; she was at the point which freight and passengers must take in the era of water transportation in passing from the lakes to the Mississippi; she was at the corner

of the lake which all travel going eastward from the regions northwest and west must pass on the way to New York; and then she secured the superiority gained before the time of railroads, by becoming the greatest inland railway centre of the United States. Accident no more governs the growth of cities than it does the bargains of individuals. The owners of freight study whether they shall ship their freight to this or that city, and select the one that offers them the most profit, and that is usually the place which, having the best natural advantages, has attracted the most intelligent men and offers the best rewards for enterprise.

HORACE GREELEY ON SAN FRANCISCO.

At a dinner given in New York on the 13th of October, 1869, to an excursion party of the California Pioneers, Horace Greeley having been called on to respond to the toast of "New York and California," in the course of his remarks said:

When we speak of the present or the expected greatness of these two remarkable cities, New York and San Francisco, I beg that it will ever be remembered that great cities are the expression of great ideas—that they grow out of the genius of illustrious men. Alexander gave his name to the city he formed, and that city bears his name and is memorable to this day. Rome is mighty because of the Senate and people that made her high and proud position—made her the Eternal City; eternal because the genius that created her still lingers over her hills, still is reflected in the sunshine that gleams on her palaces; and thus the shadows of ancient greatness recall to our minds memories and associations that make us nobler than we otherwise would be. [Applause.] If these two cities are to be great, they will be great because of the men who have still the genius to preserve and extend the advantages they have won. Had there been no De Witt Clinton, and had there been no Erie Canal, in vain would have been the central position and commercial advantages of this city. She was not the first city of America until her great men gave artificial extension and development to those advantages, and thereby fixed on her, I think, for centuries, certainly for the present age, the honored advantages of being the emporium of the Western World. If she is to maintain this position, she will do it because she will have great men continually able to keep her in advance. As she has seized the canal, telegraph and railroad, and pressed them into her service, so she must be ready, as new inventions are presented, to seize them and turn them to her advantage. As it is with New York so will it be with San Francisco. Let us not believe that because this city has quadrupled in population in the last half century that it is in the order of things and must continue. She will maintain her position, for her great men have the power to plan new enterprises, and her great financiers shall second those efforts, and continue to keep her at the head of the commercial world. So with San Francisco. The great railroad recently achieved would never have been if there had not been men in that city who saw capacities and perceived opportunities and possibilities which the multitude did not see.

Mr. Greeley is wrong in supposing that the construction of the railroad is due to San Francisco; he is wrong in supposing that the danger to which that city is exposed (he refers to it, evidently, though he does not mention it,) could be averted by the genius of her business men; and he is wrong again in assuming that genius makes cities. It is the good site that attracts and rewards genius, and stimulates enterprise.

EUROPEAN CAPITALS.

Paris, Madrid, Vienna and St. Petersburg owe their greatness to the fact that they have been for long periods the residence of the despotic monarchs to whom all the revenue of the State was paid and from whom all the revenues and offices of honor and profit went out. These monarchs were surrounded by nobles who owned nearly the whole country, and the wealthier men among them either went to the capital every year or made their permanent homes there. A large part of the profits of the nation went to enrich the capital. Under a despotic Government the city in which the Sovereign resides must be the chief centre of wealth and fashion. The great inland capitals of Europe are most of them situated in the midst of fertile plains, are conveniently accessible, by railroads and have been made the centres of the railroad systems of their respective countries, so that now, in addition to the influence of centralized political power and accumulated wealth, they have extensive industries. As a manufacturing place, for instance, Paris has very few if any equals. Venice, which was for five centuries the leading commercial city of Europe, lost her place because the discovery of the road to Hindostan by way of the Cape of Good Hope made it cheaper for vessels to run from the ports on the western and northern coast of Europe. Antwerp succeeded her because Spain, France and Germany were exhausted by frequent wars, while Flanders was quiet; but when Alva came with an overwhelming force to establish the inquisition in Flanders, the merchants and mechanics of Antwerp fled to Amsterdam and London, which then contended for the mastery.

LONDON AND LIVERPOOL.

But the territory of the Dutch was too valuable, and they had to suffer too

much from invasion and danger, so the English metropolis took the lead, which it kept until the vast trade of the United States and the increasing trade of Great Britain in this century, the distance of London from the sea, the narrowness of Thames, and the superior advantages of Liverpool gave to the latter the pre-eminence as a centre of foreign commerce. The security of the insular position, the almost uniform successes of the British navy over the French, Spanish and Dutch fleets, the stimulating influences of liberal institutions, the great skill of maritime pursuits, the acquisition of numerous and powerful colonies, the monopoly of the carrying trade of the world, the possession of the great deposits of coal in Europe, and of rich and varied mines of valuable metals, and the invention of the steam engine, steamboat, steamhorse, carding, spinning and weaving machines, contributed to make London by far the richest city and England the richest country in the world.

Many of the influences which contributed to build up London have lost most of their power. Religious intolerance will never again drive off the best mechanics of France and Belgium; it is to be hoped that frequent wars, with the consequent feeling of insecurity in continental Europe, will soon cease; Great Britain having abandoned the policy of aggressive warfare has ceased to have control of the seas and cannot maintain a monopoly of the carrying trade, under which not only her ships had constant and profitable employment, but her chief cities were the distributing points for christendom. Her insular position has been of great benefit to her commerce in the past, but in the future it will be injurious. There will be continuous iron tracks from Western Europe to Eastern Asia, connecting all the chief cities of the two continents with the trade of nearly 1,000,000,000 inhabitants; and when that network is complete, and when tariff restrictions, despotism and war have ceased to vex and destroy manufactures, agriculture and commerce, then the greatest commercial city of Europe must be on the continent, probably between Amsterdam and St. Nazaire. The railroads will make the greatest cities of Europe as well as of America.

THE GREAT HARBORS OF THE WORLD.

Many persons, especially those familiar with the roomy harbors of New York and San Francisco and with no others, object to the harbor of Valjejo on account of its narrowness, and some objection has also been made on account of its distance from the sea. A study of the harbors of the great seaports generally will show that these objections are not well founded. We have compiled the following table, showing the population and tonnage of certain prominent seaports, and the width, depth and distance from the sea of their harbors:

Seaport.	Population.	Tonnage.	Distance—miles.	Width—yards.	Depth—feet.
Liverpool.....	488,000	5,000,000	3	1,000	30
New York.....	1,500,000	3,101,691	20	1,800	30
London.....	3,250,000	2,000,000	60	300	12
Hamburg.....	225,000	1,800,000	75	300	14
Shanghai.....	400,000	800,000	40	1,000	—
Boston.....	318,000	770,000	6	900	24
St. Petersburg.....	520,000	600,000	1	300	8
Rotterdam.....	112,000	500,000	20	1,800	30
San Francisco.....	160,000	443,000	6	5,000	30
Amsterdam.....	266,000	350,000	50	300	26
Calcutta.....	400,000	350,000	100	1,500	25
New Orleans.....	191,000	381,000	100	1,000	15
Venice.....	120,000	300,000	5	200	16
Philadelphia.....	700,000	292,000	84	1,600	18
Antwerp.....	120,000	300,000	70	300	24
Baltimore.....	267,000	225,000	150	1,500	22
Canton.....	1,000,000	200,000	70	300	14
Bremen.....	64,000	73,000	50	300	7
Glasgow.....	560,000	200,000	30	200	10
Seville.....	152,000	—	70	200	5
Bordeaux.....	193,000	140,000	75	530	12
Portland, Maine.....	31,000	134,000	4	1,800	30
Savannah.....	25,000	81,000	15	150	13
Charleston.....	40,000	29,000	7	900	10
Richmond.....	40,000	4,000	70	150	10
Stockholm.....	131,600	100,000	25	500	24
Mobile.....	35,000	61,000	25	1,000	3
Valjejo.....	7,000	—	25	300	25
Montreal.....	70,000	100,000	150	300	20

The tonnage in the above table represents the aggregate measurement of all the vessels which entered in one year from foreign ports. The figures for the American seaports are from the official documents for 1868-69. The tonnage of the American ports is greater, relatively, than it appears, because our long coast line and frontage on two oceans make coasters of vessels which come from great distances; whereas in Holland, Belgium and Germany, many vessels sailing only fifty miles, or less, are counted as from foreign countries. The figures give, however, our best approximate standard for ascertaining the relative magnitude of the foreign commerce of the different places in the list.

The third column indicates the distance in miles from an open sea or gulf, and shows that London, Hamburg, Calcutta, New Orleans, Philadelphia, Antwerp, Baltimore, Canton, Seville, Bordeaux and Richmond—eleven out of the twenty-nine ports in the list—are sixty miles further from the sea; and Glasgow, Shanghai, Amsterdam, Bremen, Stockholm, Mobile and Valledo are between 25 and 55 miles. The average distance of the 29 ports is 43 miles, showing that Valledo is less than the average. Seville is of no importance now as a seaport, but for a long time after the conquest of Mexico and Peru, it was the chief port of Spain. Remote as Richmond is from the sea, it was, previous to the civil war, the chief importer of coffee in the Union after New York, and it has taken away much of the foreign commerce which Norfolk had thirty years ago, though the latter place is 65 miles nearer the sea. When we examine the depth of water at Glasgow, Bordeaux, Hamburg, Bremen and London, we see how anxious shippers must be to go as far inland as possible with their vessels. Montreal, though it has little foreign commerce, is rapidly rising in importance.

The fourth column shows the width of the harbors in yards. Of the twenty-nine places, more than a third have harbors only 300 yards wide, including London, Antwerp, Venice, Glasgow, Canton and Bremen. Each of the first three has been at one time the greatest commercial city of the world. Chicago harbor has very little foreign commerce, but has thirty miles of frontage where vessels can lie, and is visited every year by vessels measuring 3,000,000 tons in all, is only 200 feet or 66 yards wide, yet it accommodates an immense business.

The fifth column gives the depth in feet at low tide of either the harbor or the channel leading to it. The 30 feet at San Francisco indicates the depth, not in the harbor proper, where 50 feet can be found, but on the bar which ships must cross before reaching the anchorage. Many of the prominent seaports are accessible for large ships only at high tide.

The harbor proper of Marseilles is 300 yards wide and less than a mile long, but many vessels anchor in the roadstead outside. Havre has an artificial harbor with an entrance only 50 yards wide. Bristol, the second seaport of England in the last century, has a harbor only 120 feet wide. Belfast has a harbor only 500 feet wide. The harbor of Glasgow may be considered artificial, as \$10,000,000 have been spent in deepening and straightening the Clyde. For eight miles next the city the channel is only 250 yards wide, and for ten miles more only 500 yards wide. The number of vessels mostly domestic arriving annually is 15,000.

These facts go to show that natural depth and protection, great width and immediate proximity to the sea, are by no means indispensable to a harbor for the transaction of seaport business.

CHANGES IN COMMERCE

The history of commerce is a record of changes, which become more numerous and rapid as we approach our own time. Venice was the chief seaport of Europe for six centuries before the conquest of Mexico, and was succeeded by Antwerp, which held its place for half a century, and gave way to Amsterdam, which reigned for nearly a century and three-quarters, to be followed by London, and for the last quarter of a century Liverpool has headed the list. Venice reigned 600 years, from 925 to 1525; Amsterdam, 175 years, from 1525 to 1725; London, 125 years, from 1725 to 1850; and Liverpool from 1850 to 1871. If coasting and river shipping were also counted, London surpasses Liverpool, and New York probably surpasses both. Even in foreign commerce it is probable that the last named place will within half a century surpass Liverpool.

In Spain, Seville, which was once the chief commercial city, has fallen into

insignificance. Of late years Rotterdam has been growing at the expense of Amsterdam. Liverpool had very little shipping at the beginning of the last century; its commerce is a modern creation; while Bristol, long prominent, has now fallen very low relatively. Glasgow is another new place, and was for a long time inferior to Greenock, at the mouth of the Clyde; but the former has now 500,000 inhabitants and the latter 40,000. In the United States, Salem had once more shipping than Boston, and Philadelphia was for a century decidedly superior in the amount of its commerce to New York.

It is to be observed that the world is just now getting into an era of rapid commercial and industrial changes. The introduction of steam into land and water transportation has altered the conditions of business and greatly reduced the influence of previous investment of capital. The question of the future course of trade does not depend so much upon the customs, the opinions and the investments of the past as upon the facilities offered by present circumstances. If by new combinations of capital and the building up of new commercial centres, the expenses of business can be considerably reduced, then it is probable that such reduction will be effected. Wealth now solicits the advice of learned and able engineers; business imperiously demands the best possible accommodation; and a press, omnipresent and omniscient, aids to dispel the ignorance, prejudice and folly on which ancient and ill-selected business sites have been erected.

When the agitation in favor of Vallejo was commenced three years ago, we were met on every side by the objection that our aspirations were vain because all our natural advantages would be completely overborne by the investment of \$300,000,000 in San Francisco. We did not perceive the validity of the objection then, nor do we now. That city still has the money, but she cannot use it profitably; it is dead and almost powerless, while her two rivals, Vallejo and Oakland, and their two great railroad corporations, represent a large capital which is not only rapidly increasing but full of activity and influence, and it is probable that one or the other will soon obtain the warehouses and importing establishments which will speedily lead to a transfer of the bulk of the trade.

THE HARBOR OF SAN FRANCISCO.

The harbor of San Francisco is in front of what was formerly Yerba Buena Cove, a mile long and half a mile wide. This cove was filled in with sand and clay, which changed into mud; that mud covers about 320 acres inside of the water front, is 24 feet deep at Harrison street, 25 at Gilbert, 64 at Market and 76 at Howard, gradually growing shallower northward from Market and southward from Howard. The immense mass and the loose character of this mud made dredging almost useless, and offered a very insecure foundation for buildings and wharves.

HARBOR DUES.

The State undertook to remedy the evil by ordering the construction of a stone wall, to sink down to a solid foundation, and form a fixed barrier against the outward pressure of the mud inside the water line. To provide for the construction of this wall, which is yet in a very incomplete and unsatisfactory condition, the Legislature created a Board of Harbor Commissioners and levied taxes, called dockage, wharfage and tolls. The dockage charged for the privilege of lying at a wharf is \$4 per day for a vessel of 100 tons, \$12 for 300 tons, \$16 for 500 tons, \$23 for 1,000 tons, \$33 for 1,500 tons, \$45 for 2,000 tons, and so on through a long schedule which it is not necessary to copy in full. The wharfage is charged for leaving merchandise on a wharf more than two and less than eight days, and amounts to 12½ cents per ton on general merchandise. The tolls are charged for the privilege of hauling merchandise to or from the wharf, and amount to 12½ cents per ton. We copy from the San Francisco Chronicle the following table, showing the charges of a ship of 1,500 tons at New York and San Francisco, making a few changes, however, so agree with the reduction in the rates of dockage:

	N. Y.	S. F.
Pilotage in. [vessel drawing say 22½ feet].....	\$146.25	\$172.50
Yearly tonnage dues.....	350.00	350.00
Port tonnage dues.....	—	*750.00
Custom House charges, [entry fee].....	5.50	—
Harbor Master.....	29.50	—
Health Officer.....	6.50	*6.00
Receiving manifest and granting permit.....	—	1.50
Harbor dues.....	—	*60.00
Discharging Clerk.....	60.00	*270.00
Port Warden [surveying].....	30.00	*75.00
Advertising.....	1.00	—
Certificate.....	1.25	—
Commissioner of Immigrants.....	—	1.00
Dockage [say forty days].....	420.00	*990.00
Stevedoring.....	720.00	*900.00
Pilotage out.....	106.87	*172.50
Totals.....	\$1,869.77	\$3,724.50
Difference of currency.....	—	1305.00
		\$3,374.50
Deduct New York expense.....	—	\$1,869.77
Excess of San Francisco over New York.....	—	\$1,504.73

In the San Francisco column the items marked with an asterisk (*) are payable in gold coin.

The Chronicle commenting on the above table says:

The estimate of the foregoing table is made on a vessel of 1,500 tons register, which will draw when loaded, about 22½ feet. The calculations are figured as favorably to San Francisco as possible, with this exception, the pilotage in at New York is not estimated from "off shore." It is optional with captains whether they pay "off shore" pilotage or not. If paid, it would increase the item of "pilotage in" \$43.50. During winter months an additional charge of \$4 per vessel is made, giving a total increase of the New York expenses of \$40.50, the most of which, however, is seldom necessary. The item of yearly tonnage dues is a Government charge, and is payable at both ports once a year. The item of port tonnage dues is charged in San Francisco alone, and varies according to the size of the vessel. The fee of Discharging Clerk shows largely against San Francisco. In our estimate we have calculated 15 days for discharging. In New York one clerk at \$4 per day in currency is the extent of the charge. In San Francisco we saddle on the ship two clerks—one at \$8 and one at \$10 per day, both payable in coin. The item of surveying in San Francisco ranges at nearly three times at what it does in New York. It is the universal complaint that they receive no benefit from the Port Warden of this port, and that so far as the aid which he renders is concerned, the office might be abolished. Stevedoring shows sadly against San Francisco. But that cannot justly be charged to the fault of our local or State Government, as the Stevedores' Protective Association regulates this expense, independent of outside management. Pilotage out also shows sadly against San Francisco, being the same as "pilotage in." But the main item of expense, and the one most outrageously large is that of dockage. It will take a vessel of 1,500 tons register an average of forty days to discharge and receive cargo. In New York, whose wharves are always crowded, the rate is fixed at two cents per ton up to 200 tons, and half a cent per ton for every ton over 200, per day. This is an extremely high rate, and is probably exceeded by no city in the world except San Francisco. But we, with a harbor capable of accommodating ten times the shipping that ever was at one time in port, impose on those vessels which are obliged to enter our harbor by taxing them in coin at the rate of \$33 per day during the days of unloading, and \$16.50 per day for the remainder of her wharf occupancy, thus running up a bill of \$2995 in coin for a forty days' stay. Notwithstanding these exorbitant charges, we make no allowances for rainy days, holidays or Sundays. Dockage commences when the vessel makes fast to the wharf and concludes only when she hauls out, the days of hauling in and out being counted as one day.

To all the figures which we have changed we have prefixed a dagger (†).

SAN FRANCISCO WATER FRONT.

The length of the water front of San Francisco, now available for commercial purposes, extending from North Point to the foot of Third street, is 10,000 feet. West of North Point the water front is exposed to the strong and almost constant winds which blow in through the Golden Gate with so much force that shipping cannot enter and leave docks there safely, nor can they lie at a wharf without doing much injury to themselves and their wharf by the chafing and thumping.

South of the foot of Third street the mud flat is too shallow for use, and no wharfage business worthy of mention is done there.

On the water front line at low tide, the depth of the water is 23 feet at Chestnut street, 33 feet at Lombard street, 31 feet at Greenwich street, 15 feet at Filbert street, 4 feet at Union, Green and Vallejo streets, 5 feet at Broadway street, 6 feet

at Pacific street, 3 feet at Jackson street, 2 feet at Washington, Clay, Commercial, Market and Mission streets, 5 feet at Howard street, 10 feet at Folsom street, and 32 feet at Townsend.

The deep water is confined to the two ends, and is mostly at points where the wharves do not reach out to the official water front line. For 1,600 feet, including the lines of Jackson and Mission streets, the depth is only 2 or 3 feet; and for 4,000 feet from Union southward, the average depth is less than 4 feet, and in only one place reaches 6 feet. There are eleven wharves or piers projecting beyond the water front. Vallejo street wharf projects 525 feet; Broadway, 580; Pacific, 580; Jackson, 560; Washington, 525; Clay, 525; Commercial, 355; Market, 600; Larue, 381; Mission, 456, and Howard, 456. If we take the length of these wharves on each side, we have a frontage on the wharves of 12,086 feet to add to the 10,000 feet of the main water front line, making 22,000 feet, or about $4\frac{1}{4}$ miles as the actual water front now in use.

WATER FRONT AT OTHER PLACES.

Chicago has 35 miles of water front on her narrow but navigable and valuable river, and for that distance the banks are cribbed up so as to be very convenient for shipping.

New York has 164 wharves, each 400 feet long, making 131,200 lineal feet on the sides of the wharves, and if we suppose there is as much more on the main water front line, we have a total frontage at which ships can lie of 262,200 feet, or 49 miles; and complaint is made that New York has not enough frontage. It is said that there are 200 miles of frontage in the docks and harbors of London, and as many more at Liverpool.

If San Francisco were destined to have a commerce twice or thrice as large as at present, she would need at least 8 or 10 miles of additional water front, which she cannot or will not make. She has spent twenty years and \$10,000,000 in filling up 230 acres in Yerba Buena Cove, and the work is not yet done; and before extending her water front southward, she must fill up Mission Cove with an area of 600 acres between Rincon Point and Potrero Point.

The water front of San Francisco valuable for commercial purposes or susceptible of being made valuable, lies on the Eastern side of the peninsula extending six miles southward from Telegraph Hill. This water front in its natural condition was made up of five high rocky points jutting out into the bay with four shallow intervening coves or mud flats. Telegraph Hill, 300 feet high, is separated by Yerba Buena Cove, a mile long from North to South, and half a mile wide, from Rincon Point 120 feet high; then comes Mission Cove, about a mile long and a mile wide; then Potrero Point a mile wide and 300 feet high; then Islais Cove a mile and a half long and a mile wide; then Hunter's Point, or South San Francisco, 260 feet high; then Bay View Cove, a mile and a half long and a mile wide; and finally Visitation Point. Yerba Buena was originally the deepest of these coves, and as it offered the best anchoring the nucleus of the city grew up around it; and then the cove itself was filled in. Although the smallest of the coves, the filling in after 20 years of work and great expenditure, is not yet complete. If accommodations for shipping could not be obtained elsewhere at less expense, Mission and Islais Coves would certainly be filled, notwithstanding the cost of \$20,000,000 or more. These two coves are not only larger than Yerba Buena, but each has at its back considerable areas of swamp and low land which could with difficulty be drained. The position of these coves or mud flats, their size and shallowness, are shown distinctly in Chart No. 49 in the U. S. Coast Survey Report of 1856. This report can be found in most of the large libraries of the United States, and in the shops of dealers in navigators' charts.

Ten miles of good water front could be made at either Vallejo or Oakland for much less money than would be required to make additional miles at San Francisco. These considerations of the inadequacy of the present water front for a large commerce, the necessity of constructing more, and the great cost of construction at San Francisco, will compel Vallejo or Oakland to furnish accommodations for a considerable part of the future commerce of California.

GREATER CHEAPNESS OF VALLEJO.

The insufficiency of the harbor accommodations for the present business of San Francisco is implied in the following extract from the *Alta California* of August 11th, 1870:

"A number of cargoes of lumber have recently gone to Vallejo and have been delivered there on the wharves, it is said, for 75 cents per thousand feet less than they could be delivered on the wharf in San Francisco. The water is so shallow in front of Stuart Street, where our lumber wharves are, that the vessels must lie off and discharge into lighters. That double handling is not necessary at Vallejo or Oakland, which, therefore, now have a decided advantage for supplying the interior with redwood, or for sending sugar pine abroad."

The same paper the next day published a communication containing the following passage:

"You mention the fact of many cargoes of lumber, etc., being shipped from 'Mill Ports' direct to Vallejo. Not only is this the case, but at the present writing large contracts for cargoes of lumber, laths, shingles, posts, railroad ties, etc., have been, and are being made, which cargoes will go direct to Vallejo, Sacramento, Stockton, and many other smaller ports on our bays and rivers. Until but recently all this trade has, to a greater or less extent, been done at our wharves. Vessels with a capacity of several hundred thousand feet, can go direct to the wharves at Vallejo and Oakland Point. Already at these two points this year, lumber to the extent of about ten millions of feet, has been landed, requiring some twenty large vessels for tonnage; in addition, some forty smaller vessels have landed at these points cargoes of posts, railroad ties, etc. All this business, formerly done at our water front, has left us never to return."

THE EXPORTATION OF WHEAT.

The monopoly of the handling of the wheat of the State, possessed by San Francisco three years ago, is now lost forever; and most of the wheat business done at her wharves last year went there because the wharves and warehouses at Vallejo and Oakland were unfinished. The freight by railroad from Modesto Station, in the Paradise District, San Joaquin Valley, to the end of Oakland wharf, including loading and unloading, is \$2.70 per ton, and transfer to the ship 25 cents, making a total of \$2.95 per ton. The cost of hauling wheat by horse teams from Modesto to Stockton is \$5 per ton; the wharfage, weighing and handling at Stockton is 50 cents; the freight in a schooner to San Francisco \$1, and the average waste (by bursting sacks, etc.,) 18 cents, making a total of \$6.68 per ton; whereas, the hauling to a railroad station costs \$2.50 per ton, the weighing and loading 30 cents, railroad freight to the ship's side \$2.50 cents, the wastage 1 cent, making a total of \$5.31 per ton; or a saving of \$1.37 per ton for the railroad route. On account of the peculiar arrangements at San Francisco, however, the wheat is seldom transferred directly from the schooner to the ship, but is usually sent to the warehouse and then must pay 10 cents wharfage, 50 cents drayage to warehouse, 50 cents storage and 50 cents drayage to ship, making a difference of \$2.97 in favor of the Oakland route. The greater part of the wheat raising region of the San Joaquin valley is farther from Stockton than Paradise, and can make a greater relative saving by sending grain to the ship by rail.

The transfer of wheat from Vallejo to San Francisco in schooner, costs \$1 per ton; the wharfage is 10 cents for the schooner; the warehouse charge, including drayage to and from the wharf, is \$1.50; and the ship while loading must pay about 15 cents per ton dockage, making the total expense \$2.75 per ton, or \$2.750 on a cargo of 1,000 tons. All those expenses are saved by sending the ship to Vallejo at a cost of \$250 for towage. More than \$2 per ton are saved by sending vessels to Vallejo, or about 5 per cent. on the value of the wheat.

THE VALLEJO ELEVATOR.

Vallejo has the only grain elevator on the Pacific coast. This building is 100 feet long, 85 wide, 123 high. It contains 39 bins, each capable of holding 250 tons, or 9,750 tons, or about 350,000 bushels. There is, besides, storage room in the lower story for much more. The elevating machinery can hoist 1,500 bushels per hour into the bins near the top of the building. The charges of the Elevator for receiving and delivering grain in bulk, including storage for not more than one month, are 50 cents per ton.

SHIPMENT IN BULK.

The Elevator was built to handle grain in bulk, but has stood idle save for storage for two years, as the insurance agents refused to insure grain in bulk.

They object on the ground that if the ship leaks, the heating and germination will extend from the small quantity of wet grain to the whole cargo, whereas, if the grain were in sacks there would be open spaces through which the air would circulate, thus preventing the spread of heating. It is also said that the grain may swell so much as to burst the ship, and that the loose kernels got in the pumps and do much harm. As San Francisco has no Elevator and does not expect to have one, the commercial papers there are not very friendly to the idea of shipping in bulk. A San Francisco newspaper of April 8, 1870, said:

"The shipment of grain in bulk has been tried frequently from New York with sad results, and has been abandoned for years. If it cannot be done successfully from Atlantic ports, it would be worse than folly, almost criminal, to attempt it from San Francisco to ports in Great Britain. We feel assured that no intelligent ship-master would willingly incur the risk, and we know the insurance offices will not."

To that statement the New York Shipping and Commercial list of May 4, 1870, replied thus:

"We may state for the benefit of our contemporary, and our California readers, that the shipment of grain from this port to European ports in bulk, has not only not been abandoned, but that method was never in greater favor than at present.

Of some three hundred vessels that have been dispatched hence to the outposts of Great Britain during the last twelve months, there were not more than three or four which took grain in bags. The London and Liverpool packets, with mixed cargoes, have also carried a large portion of their grain in bulk, and the same is true of the Cunard and the Liverpool and Great Western steamship companies.

The positive assertion * * * that insurance companies will not underwrite for grain in bulk, is equally wide of the truth. None of our marine underwriters, so far as we are aware, refuse to take such risks, though the business is nearly monopolized by two companies—the United States Lloyds and the California Union. The last mentioned company have taken hundreds of risks of grain in bulk, as our contemporary might have ascertained if it had sought the information at the San Francisco office.

The business of shipping grain in bulk met with sorry discouragements at the outset, mainly through the faulty construction of the bins, but of late years the system has worked admirably, and disasters to vessels thus loaded are no more frequent than to ships otherwise freighted. The greater economy in shipping in bulk over the other method is so obvious as to call for no illustration.

The exporters of San Francisco have always adhered to the system of bagging their grain, and, as the California cereal surplus has reached large proportions, the gunny-bag and gunny-cloth interest has become of considerable consequence. That interest, it is suspected, is the principal obstacle in the way of a change from bag to bulk shipments. Our San Francisco contemporary cites one experiment of shipping grain in bulk from that port to England, which turned out disastrously—the vessel putting into Valparaiso with her cargo shifted. Years ago similar disasters occurred on the Atlantic, but, as before remarked, the system has been so perfected, that it now works to the satisfaction of ship-owners and underwriters; and, if California is to continue a leading grain exporter, the same system, it is quite probable, will be adopted there, on the score of economy."

It is a well-known fact that a considerable proportion of the wheat ships bound from California to Europe have virtually loaded their grain in bulk. The sacks slide down a long plank or chute, sometimes 30 feet long, and as they are not very strong, many of them are broken by the shock of stopping. The grain then runs out and the bag is thrown to one side. Thus, though the most of the wheat is in sound sacks, there is enough loose wheat to fill up all the spaces between the sacks for many feet from the bottom. Besides the accidental breakage of the bags, the stevedores, in loading the ships, find that they can get more cargo into a vessel and otherwise facilitate their labor by cutting the sacks; and therefore it is a common practice with them; and they say that they are justified in cutting the sacks, not only by the custom of the port but by the necessity of making the vessel stiff by putting as much weight as possible at the bottom. Among the great number of wheat ships which have left San Francisco bay for Europe in the last five years—probably 500 in all—it does not appear that more suffered disaster at sea than of other classes of shipping; nor has it been proved that any disaster has been caused originally by loose grain. The obstruction of the pumps by grain is a secondary matter, and of that there is no danger in iron ships. The cost of sacks varies from \$1 to \$3 per ton, averaging about \$1.50; so on a cargo of 1,000 tons there would be a saving of sacks worth \$1,500, by shipping in bulk. Again the shipment in sacks requires storage by hand, and that costs about 50 cents a ton.

It has been said that the loading of ships with wheat at Oakland and Vallejo does no harm to San Francisco, because the ships enter at the Custom House there, discharge their imported cargoes on the wharves there, are consigned to

merchants there, are chartered by wheat buyers there, and are loaded by stevedores who live there and come to Vallejo and go to Oakland where a ship is to be filled; so that all the money is handled there and all the parties to the transaction reside there. This is so far true; yet every ton loaded here or at Oakland causes a direct loss to San Francisco of \$2; and the steady increase causes a much greater incidental loss in confidence and in the decreased value of property. Besides, San Francisco profits will soon cease on the loading of cargoes in rival places, which must in a year or two possess merchants and laborers who can do the business cheaper than it can be done on the other side of the Bay. The idea that the transfer of wheat exportation to Vallejo and Oakland means no harm to San Francisco is a delusive phantom, dangerous to business men who cherish it.

We have seen that the cost of loading wheat for Liverpool is about \$2 cheaper per ton at Vallejo than at San Francisco, and that it costs about \$2 less per ton to load wheat from Modesto to Oakland than at San Francisco. It is not strange with such a saving, that much of the wheat of the State is loaded at Vallejo and Oakland. The only cargoes so far sent from those places have been composed exclusively of wheat, because that was the only article they were prepared to ship. Before they can export quicksilver; wool, hides, ores, and other articles that go to make up mixed cargoes, they must have more warehouses, laborers, and merchants familiar with the various kinds of produce. But these things they will of course have, if they can export more cheaply than San Francisco. In a few years all the exports of this part of the State will be loaded at Vallejo and Oakland.

The export business, however, cannot stand alone; so soon as it is seen that \$2 can be saved per ton on imported merchandise, then the importers will move from San Francisco to the cheaper points, and they will be followed by the bankers, insurance companies, mechanics, and other people who make up the bulk of a city.

MANUFACTURING ENTERPRISES.

The California Pacific Railroad Company intend to establish in Vallejo all their shops for building and repairing cars and doing such other work as can be done at the terminus; and this will also be the place for repairing and after a time for building new boats. These shops will be costly buildings, to cover an extensive area, and to furnish employment to a large number of men.

A public announcement has been made that to parties who will furnish one-fourth the capital and establish manufactories of any description in Vallejo, J. B. Frisbie, of this place, offers a loan of the remaining three-fourths of the capital required at ten per cent. per annum. This offer would not appear very attractive in New York or Europe, but the terms are more liberal than could be obtained in any other place in California. In San Francisco the manufacturer would not only have to furnish land as the security for this loan, but could not borrow more than fifty per cent. of the value of the land. For loans not secured by land the usual rates are from 15 to 20 per cent. per year. Besides making arrangements for loaning money to manufacturers, General Frisbie has also been preparing plans for several industrial enterprises in which he is to be chief owner. He proposes to establish here a large slaughtering yard from which to supply not only all the butchers of our town, but also adjacent towns, and even San Francisco. Our proximity to the moist pasture land of the northern coast and of the Sierra Nevada, and our access to them by rail, give us great advantages for bringing cattle in; and our cars and boats, running early and late, enable us to transport our beef without loss. We have, besides, extensive pastures near the town, in which we can conveniently keep cattle while waiting for slaughter.

It so happens that San Francisco and Sacramento are both unfortunately situated for the slaughtering business. At the latter place the heat of Summer is oppressive, the pasture is not very good at any time, and is exposed to overflow in Winter and Spring. At San Francisco pasture is not to be got near the city, and even at a considerable distance it is very costly. Vallejo occupies a central position whence San Francisco, Sacramento, Stockton, Oakland, Marysville, Napa, Sonoma and Martinez can well be supplied.

Connected with the slaughter yard, we might have a tannery, for here we could obtain the bark and the hides at little expense, and all the accommodations required for very extensive tan yards can be found in and near our town. Boot

and shoe manufacturers might also appropriately accompany the establishments for the production of leather.

Vallejo is peculiarly well situated for large wine houses. Sonoma, Napa, Solano and Yolo together have 6,500,000 grape vines, or nearly one-third of all in California. Sonoma makes the best wine and Napa the best brandy in the State. The vineyards are only about one hour distant from Vallejo, and this is a central point to which their grapes can be collected at the least expense. Those four counties will in a few years produce 3,000,000 gallons of wine annually, besides using many of their grapes for the table and for brandy. Some extensive cellars like those of Dijon and Bordeaux will be required where these wines can be stored and managed. Especially for the production of sparkling wine will Vallejo be a centre, for we are here near the valleys which produce the light wines best fitted for effervescent preparation. The house of Landsberger & Co., which has demonstrated that sparkling California can be made to equal sparkling Champagne, started in San Francisco, but as its operations are enlarging, will probably find in a few years that a transfer can be made with profit to Vallejo, where they will find many conveniences not obtainable at their present place of business. Districts in France neither so large nor so fertile as that tributary to Vallejo, maintain considerable cities mainly by their wine industry, and California must have its wine cities, too, including several north of San Pablo Bay, which is noted now not only for having the best wine climate of the State, but also for having the largest vineyards and distilleries, and the most careful and competent class of wine makers.

We have thus mentioned a few enterprises which have been under consideration and will almost certainly be undertaken at no distant day, with sufficient capital and skill to carry them on successfully; but we are fully satisfied that when the water of Clear Lake is brought into our town, we shall have a great variety of manufacturing establishments for working up wool, cotton, iron, brass, leather, into the innumerable articles demanded by the multiplex wants of society and industry of our time.

THE NORTHERN HALF OF CALIFORNIA

We claim that Vallejo is not only better situated to be the commercial and financial metropolis of California than any other place, but that it has such peculiar advantages for being the chief railway terminus and seaport of the northern half of the State, that in a few years neither San Francisco nor Oakland will be able to offer any respectable competition.

Now, let us see what the trade of the northern half of the State is worth. We give a list of the counties, with the population and taxable property of each:

	Population.	Taxable Property.
Butte.....	11,315	\$ 2,614,589.00
Colusa.....	6,171	3,912,400.00
Del Norte.....	2,113	486,599.00
El Dorado.....	10,326	2,267,674.00
Humboldt.....	6,109	2,115,230.00
Klamath.....	1,678	399,824.00
Lake.....	2,873	897,087.00
Lassen.....	1,331	571,356.00
Marin.....	6,775	2,717,003.00
Mendocino.....	7,025	2,237,764.00
Napa.....	7,155	4,027,624.00
Nevada.....	19,134	5,861,065.00
Placer.....	11,376	3,480,208.00
Plumas.....	4,490	1,201,830.00
Sacramento.....	27,102	11,173,704.00
Sierra.....	5,337	2,000,072.00
Shasta.....	4,191	2,000,000.00
Siskiyou.....	6,881	1,750,318.00
Solano.....	16,396	6,114,622.00
Sonoma.....	19,679	6,545,067.00
Sutter.....	4,550	2,406,295.00
Tehama.....	3,597	2,058,457.00
Trinity.....	3,173	585,005.00
Yolo.....	7,913	4,578,145.00
Yuba.....	10,865	4,066,155.00
Northern Half.....	208,523	\$ 78,068,473.00
Entire State.....	557,375	252,401,337.00
San Francisco.....	150,273	102,687,980.00
Southern Half.....	198,580	71,645,875.00

We do not count San Francisco as part of the Southern half of the State, because its business is not fixed and may be transferred to other points. Mineral and agricultural resources are permanent; commercial business is movable. The northern half of the State has four-elevenths of the population and three-tenths of the taxable property of the State. The figures in the above table are taken from the reports of the U. S. Census Marshal and the State Surveyor General made in 1870. The taxable property of Shasta is estimated, there being no return from that county for several years past.

The north half of the State surpasses the south in the matter of railroads. The following are Vallejo roads:

	Miles.
California Pacific, Main Trunk.....	60
“ “ Napa branch.....	35
“ “ Donahue-Healdsburg branch.....	42
“ “ Marysville branch.....	35
“ “ Vacaville branch.....	5
“ “ Oroville branch.....	26
Total.....	203

The following are the roads running eastward and northward from Sacramento, within the State line;

	Miles.
Central Pacific, Main Trunk.....	138
“ “ Oregon branch.....	105
“ “ El Dorado branch.....	45
Total.....	288
Add Vallejo roads completed.....	203
Completed roads of the North.....	491

The following branches of the California Pacific are under contract:

	Miles.
Adelante and Petaluma branch.....	23
Bloomfield branch.....	16
Eastern Extension branch.....	145
Total under contract.....	184
Add completed roads.....	491
Completed and under contract.....	675

The roads completed out from San Francisco, Stockton and Oakland, are the following:

	Miles.
Western Pacific.....	140
Southern Pacific.....	100
San Joaquin Valley.....	20
Copperopolis.....	28
Total.....	288

In the above we do not count so much of the Western Pacific as lies between Stockton and Sacramento, that section being considered as belonging neither to the north nor to the south of the State.

The following roads are under contract:

	Miles.
Stockton and Visalia road.....	25
Stockton and Copperopolis.....	10
Total under contract.....	35
Add completed road.....	288
Total completed and under contract.....	323

We have no report that parts of the Oregon branch of the Central Pacific, of the Southern Pacific or of the San Joaquin Valley road are under contract, but we presume that they will all advance this summer. Leaving out of consideration the 45 miles between Sacramento and Stockton, and the 19 miles of the Los Angeles road, which last is unconnected with the general railroad system of the State, California has 779 miles of railroad completed, and of this amount the north half of the State has 63 per cent., or nearly twice as much as the south, including San

Francisco. Counting the miles under contract with those completed, the north has 674 miles against 323 in the south.

The north is richer in timber than the South. The Southern coast, except in San Mateo and Santa Cruz counties has little valuable timber; whereas the entire coast from Bodega to the Oregon line is heavily timbered.

The north is better provided with moisture than the South. At Crescent City the annual rainfall is 36 inches, at Humboldt Bay 34, at San Francisco 23, at Santa Barbara 15, and at San Diego 10, showing an average decrease of more than two inches to each degree as we move southward from the Oregon line. No drouth has ever troubled Humboldt county, and in the seasons of 1863, 1864 and 1871, when the crops were scanty in the south half of the State, they were good in Sonoma, Napa and Mendocino. If the San Joaquin valley were irrigated, it would become the chief agricultural district in the State, because it has the largest body of fertile soil and is well situated for irrigation and tillage; but until water is supplied to it by artificial canals, the north will be the safer place for farmers, and will be the chief centre of wealth. The San Joaquin valley, however, is nearer by water to Vallejo than to Oakland, and will be as near by rail when the road is completed from Stockton to Martinez. The immediate vicinity of Vallejo is the richest part of the State. The following figures are derived from official reports:

	Solano.	Napa.	Sonoma.	Yolo.	Total.
Population.....	16,396	7,153	19,679	9,913	53,141
Taxable Property.....	\$6,114,622	\$4,027,624	\$3,545,067	\$4,578,145	\$21,295,458
Acres cultivated.....	250,000	42,000	248,520	100,000	640,520
Grape Vines.....	1,128,000	1,700,000	3,240,520	377,400	6,445,920
Fruit Trees.....	86,000	115,000	357,000	130,000	488,000
Neat Cattle.....	12,451	9,881	37,940	7,900	68,378
Sheep.....	41,754	8,200	50,500	41,188	143,442

By these figures it appears that for every inhabitant in these four counties, clustered about Vallejo, there are \$400 of assessed property (representing at least \$2,000 of market value), 13 acres of cultivated land, 125 grape vines, 10 fruit trees, 1 cow and 3 sheep. These counties have besides 160 miles of railroad completed and about 50 more under contract, thus putting them far in advance for railroad facilities of any other agricultural district of equal area in the State.

PASSES.

The north has the best passes giving access from the Sacramento Basin to the interior of the continent. The latitude of San Francisco is 37 degrees 48 minutes, while Baltimore, St. Louis, Cincinnati, and three-fourths of the population and four-fifths of the wealth, industry and enterprise of the nation are farther north. The Pacific Railroad crosses the continent in latitude 41 degrees, 30 minutes, on the line located so as to best accommodate the densest settlements of the upper Mississippi Valley. The richest unoccupied districts of the country are north of the railroad, extending up to latitude 55 degrees in British America, and the bulk of the future trade entering California by inland channels will in the future, as at present, come in at points north of latitude 39 degrees. The Sierra Nevada extends from 35 degrees to the northern boundary of the State, and from latitude 39 degrees, 45 minutes; as we go southward the elevation of the passes steadily increases. The following table of the latitudes and elevations of the Sierra Nevada passes is copied from the Yosemite Guide Book, prepared by Prof. J. D. Whitney, of the State Geological survey of California:

	Latitude.	Elevation.
Unnamed Pass.....	36 deg. 32 min.	12,057
Unnamed Pass.....	37 deg. 28 min.	12,400
Mono Pass.....	37 deg. 55 min.	10,766
Sonora Pass.....	38 deg. 10 min.	10,118
Silver Mountain Pass.....	38 deg. 30 min.	8,775
Carson Pass.....	38 deg. 45 min.	8,775
Johnson Pass.....	38 deg. 50 min.	7,332
Georgetown Pass.....	39 deg. 10 min.	7,111
Donner Pass.....	39 deg. 20 min.	7,055
Hennes Pass.....	39 deg. 30 min.	6,599
Yuba Gap.....	39 deg. 38 min.	6,641
Beekworth's Pass.....	39 deg. 45 min.	5,215

In latitude 35 degrees, 40 minutes, at the northern end of Sierra Nevada and of the San Joaquin Basin is Walker's Pass, 5,302 feet high, but it has an exten-

sive desert east of it, and will probably not be used for railroad purposes in many years. The transcontinental railroads to be built hereafter to California will, in all probability, enter the State north of Donner Pass, and will have their termini at Vallejo.

THE SOUTHERN TRANSCONTINENTAL RAILROAD.

When it became evident in the summer of 1869 that the construction of the Middle Pacific Railroad had done serious injury to San Francisco, the newspapers and merchants of that city said a mistake had been made in not building the road on the Southern route, and they expressed the hope that a road would soon be made across the continent on the 35th or 32d parallel, which road they thought would bring all the trade to their metropolis and have no pernicious effects in any way. Their theory was that as the bulk of the population in the State belonged to the northern and middle districts, their traffic would pass through San Francisco.

THE THIRTY-FIFTH PARALLEL DEAD.

We can find nothing to support that opinion, which obtained currency at a time when it is proposed to extend the Kansas Pacific Railway line on the thirty-fifth parallel, and when that project had many friends in Congress, while the thirty-second parallel project had few. The main terminus of the thirty-fifth parallel road was to have been San Francisco, and if there had been a branch to Los Angeles or San Diego it would have been treated only as a matter of minor importance. But the thirty-fifth parallel project is dead; the thirty-second parallel bill has passed; San Diego is the main terminus, and the branch to San Francisco is so long and crooked and runs through so much desolate country that it cannot have much trade; and even if it were short and well situated, it would be at a disadvantage, because it belongs to a different organization, and the Main Trunk Company will use all their influence to carry their freight and passengers to San Diego, the prosperity of which they will seek to advance because they own land there. Instead of securing the monopoly heretofore held by San Francisco, this road would aid in breaking it up, by building up a rival seaport and providing a nearer and cheaper channel to New York for the imports, exports and travel of the Southern coast.

SOUTHERN ROAD DOUBTFUL.

But we regard the construction of this road as remote and doubtful. The resources of the company so far as known are not sufficient to do the work. The main trunk from Marshall to San Diego is 1,200 miles long, 550 in Texas and 650 in New Mexico, Arizona and California. Texas owns all the public land within her borders, and has made a considerable grant to assist this road. At the last session, Congress gave 25,600 acres per mile in New Mexico and Arizona and 12,800 acres per mile in California. The grant in Texas has not been considered sufficient to build the road, for it was made 14 years ago, and very little has been done. West of Texas the route runs through a desolate, uninhabited country, with no town or large white settlement near the proposed line. A section 400 miles long, commencing 25 miles east of San Diego, is one of the most forbidding parts of the continent, unfit for cultivation, pasture or even habitation, unless by the few who wish to entertain the traveler in the desert. The heat of the summer is oppressive, water is found only at long intervals, and the soil is a loose sand which is swept about in clouds when the winds are high.

POVERTY OF THE ROUTE.

The country is poor along the whole line, and at both ends of it. Texas has 850,000 inhabitants, Arizona and New Mexico together have 100,000 inhabitants, mostly Mexicans, and the three counties of San Diego, San Bernardino and Los Angeles, forming the southern end of California, covering an area of 20,000 square miles with 150 miles frontage on the Pacific and as much more on the Colorado river, have only 24,000 inhabitants. With this compare the resources of the Middle line; several millions in Iowa, Missouri and Nebraska, 575,000 in California,

42,000 in Nevada, \$9,000 in Utah, 40,000 in Colorado, 20,000 in Montana, 14,000 in Idaho, 90,000 in Oregon and 23,000 in Washington. With the prospect of the monopoly of the through overland trade, and of the important local trade of 500,000 inhabitants near the line, with a land grant as large as that of the Southern Transcontinental road and on better soil, and with a loan of \$48,000 per mile of bonds, for upwards of 100 miles, commencing 7 miles from Sacramento, the Central Pacific Railroad Company could not reach the summit of the Sierra until the Legislature of California gave additional assistance by paying the interest on \$1,500,000 and providing for county subscriptions to the amount of \$1,500,000. With all that aid, and under those comparatively favorable circumstances it required six years to reach Salt Lake; and if the Southern Pacific reaches the Rio Grande from the west in 18 years with no further aid from the public treasury than it has at present, its directors will deserve much credit for financial management.

ACCESS TO SAN FRANCISCO.

The main trunk of the Southern Transcontinental road and the branch to San Francisco, are two separate enterprises. The franchise and land grants are held by distinct companies and the resources of the two routes are entirely distinct in character. The completion of either line does not necessarily imply, though it would assist the completion of the other. But if both were built and commanded a large trade, San Francisco would have no secure hold on it. The cars would pass through either Stockton or San Jose; if by way of the former place they would of course reach Oakland first, and if by way of the latter they could reach Oakland more conveniently than San Francisco. From San Jose two tracks run northward; one on the eastern side of the bay has a level grade, and terminates on land and on a deep-water wharf owned by the railroad company on a water front where no harbor dues are levied; the other on the western side of the bay has a hilly grade, and terminates two miles from wharves in which the railroad company has no ownership, and on which harbor dues are collected. It is not strange under these circumstances that much of the wheat grown in Santa Clara county last year was carried by rail to Oakland and there loaded for Liverpool, at an expense of \$1 per ton less than it could have been loaded at San Francisco. We do not perceive that San Francisco has any assurance that she could be the main terminus of the Southern Transcontinental Railroad or of the Southern Coast Railroad.

THE RESOURCES OF OAKLAND.

In March last an anonymous pamphlet entitled "Information concerning the Terminus of the Railroad System of the Pacific Coast," was published, the purpose being to show that Oakland must be the main terminus of the railroads of California. The writer contents himself with describing the railroads of the State, and the situation of Oakland, without discussing its relative advantages, or the disadvantages of other places, and without giving an explanation of the importance of the proposed artificial harbor, any description of the work necessary to make a permanent harbor, or any reasonable estimate of the expense. The pamphlet contains maps showing the water front of Oakland, the proposed canal, and the railroads of the State.

THE PROPOSED CANAL.

The map represents a canal more than five miles long in a direct line. It commences at water 27 feet deep at low tide, two miles and a quarter from the shore, runs nearly east to the mouth of San Antonio creek, with a width of 300 yards, bends about ten degrees to the northward, and runs in that direction for a mile, widening out to 400 yards, bends fifteen degrees to the southward and runs with a width of 400 yards to the end of the harbor, which there enlarges into a basin a mile and a fifth long and three-fifths of a mile wide. The frontage is 13 miles long. An arm called Lake Merritt, not intended for navigation, about two miles long and a fifth of a mile wide, lies between Oakland and Brooklyn. The whole area covered by the canal, its basin and its Lake Merritt branch, is about 1,200 acres. The present depth of the water at the end of the proposed canal as we have said is 27 feet at low tide, and it gradually decreases as we go eastward, in a

mile and a quarter to 3 feet on the bar; then increases again to 20 feet at the mouth of the creek, shallows to 11 feet at the Broadway wharf, and deepens to 23 feet about a mile and half above Broadway wharf. This is the natural depth; but after the construction of the walls, the depth would be increased to 20 or 22 feet at low tide to enable large ships to lie in the canal.

The proposed canal outside of the present mouth of the creek is as long as the railroad wharf, and parallel with it, and distant from it nearly one mile to the southward. According to the map the wharf, for its entire length, is on a tract of land about a fifth of mile wide, belonging to the railroad company, which also has a tract about 5,500 feet long and about 1,000 feet wide on the southern bank of the canal, near the mouth of the creek, and another tract about 600 feet wide and 1,000 feet long, with the longer front on the southern bank of the canal at its outer end. A car track is to run along the entire length of the harbor on its southern bank, about 300 feet from the water's edge, and along the eastern and northern bank for a mile and a half.

The map of the water front in the pamphlet, we are told, has been copied by permission from an elaborate map which the Water Front Company has recently prepared; and "the proposed line of crib-work on the sides of the canal is the line established by the engineers employed by the company." We are not informed when the work of fitting this canal for commerce is to be commenced or finished.

We admit the fact that an excellent harbor can be made at Oakland in the manner proposed, and that the harbor once made will, by the force of the tide, be kept deep; that the expense of making 13 miles of water front available for use of shipping will cost much less on this canal than on the wide mud flats of San Francisco south of Rincon Point; and that as Oakland, in comparison with San Francisco, has superior advantages for railroad and harbor facilities, and also has a better site, it would inevitably surpass the latter place if the contest lay between them alone.

THE WATER FRONT CONTRACT.

On the 1st of May, 1868, a contract was signed between the Western Pacific Railroad Company (now merged in the Central) and the Oakland Water Front Company, in which it was stipulated that within three months the Western Pacific Railroad Company should select 500 acres of the water front in one or several strips 100 feet wide for the right of way, and within a period of three years from date should "complete a railroad connection from its main line to the said parcel or parcels thus selected by it, or one of them, and will within said time complete such railroad connection thereto; and further, will erect and construct on said selected parcels, or one of them, the necessary buildings and structures for a passenger and freight depot, for the use of its railroad, expending upon its said premises within three years not less than \$500,000 in gold coin."

It was also stipulated that Horace W. Carpentier should receive 25,000 shares of the stock of the Oakland Water Front Company, Leland Stanford 20,000, and J. B. Felton 5,000. The requirements of this contract have been fulfilled—so far as the public have the means of knowing; the improvements have been erected; the money has been expended; the terminus has been made. And it is so far the only terminus, and the company have shown no desire to make a terminus elsewhere. Their chief interests are at Oakland, and it is proper, in a business point of view, for them to assist in building the place up. They have 500 acres of water front land belonging to the company in its corporate capacity; they have 70 acres of up-land near the end of the wharf, and have several hundred acres back of Brooklyn and two other tracts. The members of the Board of Directors in their individual capacity, own four-tenths of the water front (there being about 5,000 acres in the entire tract), and Leland Stanford has purchased the Warm Springs property, 20 miles from Oakland, valued at several hundred thousand dollars.

If the purposes of the Central Pacific Railroad Company are to be inferred from their actions, it is clear that they intend to make their sole terminus at Oakland; and if their present intention and influence could decide the location of the main railway centre of the State, we should consider it useless to argue the matter. Their decision has been made, but it is not conclusive. It is one of the disad-

vantages of Oakland that no combination of capitalists, railroad and steamship companies, can secure its success until after the construction of a secure harbor, which would require a large expenditure and years of time; and even after the commencement of the work the death of a few of the projectors, or the advice of engineers might cause an abandonment of the enterprise and the transfer of the influence to Vallejo, which at any moment, by a combination of the Central and California Pacific Railroad and the Pacific Mail Steamship Companies, could be converted at once into the great and only railway centre of the State, and from that time forward its superiority would be secure against all opposition. Its harbor, its railroads are complete, and its water front and warehouses can be fitted up in a few months to accommodate a large commerce.

GOAT ISLAND.

Goat Island has been mentioned as a point where the Middle Pacific Railway should make its ultimate terminus; but the Federal Government will probably retain possession of it for military purposes; but the island, if given for a railway terminus, would never be of much use. It is not strange that the Central Pacific Company should be willing to accept it as a gift, but they have not offered to pay for it, or even to give security that they would make their main terminus on it if it was granted to them. The island has an area of 141 acres, and rises to a height of 343 feet, with steep banks on the north, south and west, and no flat land near the water level, save a few acres to the east. No part of it is fit for the erection of business houses; none of its water front could be conveniently fitted for an anchorage. On three sides it is exposed to winds so strong that vessels could not tie up to the wharves, and the wharves themselves would be expensive and insecure. The cost of grading an average acre of the island to a level suitable for business would be \$75,000, with no prospect of any adequate return. The banks of San Antonio creek furnish a much better and cheaper place for a harbor and railway terminus.

VALUE OF GOAT ISLAND FOR MILITARY PURPOSES.

In 1867 the Terminal Central Pacific Railway Company, which proposed to construct a road from Vallejo to Oakland, solicited Congress for a grant of Goat Island as a Terminus. The application was referred to the engineers of the U. S. army, stationed at San Francisco, for their opinion of the importance of Goat Island in a military point of view. Major G. H. Elliott, Major G. H. Mendell and Gen. B. S. Alexander made their report on the 8th of January, 1868, to the effect "that no portion of the island or of the adjacent shoal, should pass out of the control of the Government." They say:

The great importance of Yerba Buena Island, if occupied in time of war with long range guns, as securing the water front of the city of San Francisco from occupation by a hostile fleet, should such be found in the harbor on the declaration of war, or should it succeed in entering the bay, either by force, by stratagem, by surprise, in a dense fog or the darkness of night, has been acknowledged by all our engineers who have considered the subject. The island will cover by its fire the entire water front of the present city of San Francisco, and it is the last point from which the anchorage in front of the city can be defended.

The Board of Engineers were of the opinion that if the island were granted with the privilege of building a wharf or bridge across from the mainland, Congress might afterwards feel compelled, on account of some accident or fears of travelers to allow the construction of a solid embankment from the island to Oakland, thus increasing the speed of the tide along the water front of San Francisco and threatening serious troubles to its wharves and business. The people of Oakland and the people of San Francisco are alike opposed to Goat Island as a terminus, and the Goat Island Terminal project, is, we believe, dead.

THE STOCKTON SHIP CANAL.

The question whether it will pay to construct an artificial harbor at Oakland will depend partly on the question whether the heavy freight could be transferred more cheaply between the car and the ship at some other point further inland. All the freight going to or from Oakland by rail would have to pass through Vallejo, Antioch, Stockton or San Jose. The two former are accessible for large

ships; and the two latter can be made so. Stockton lies east of Oakland, 85 miles distant by rail and 125 by the navigable channel, which is 20 feet deep at the shallowest, and several hundred yards wide at the narrowest, up to within 13 miles of Stockton, but boats drawing over 5 feet cannot reach the city at low water. In the Coast Survey Report, of 1866, may be found a chart showing the size and depth of the channel in Suisun Bay and in the San Joaquin river to a point near Stockton.

A company has been organized to cut a canal from the town to the deep and wide channel in the river; and Gen. Alexander, of the U. S. Engineer Corps, having examined the country, has made a written report, to the effect that the project is practicable, and that a canal 106 feet wide at the water line, 20 feet deep at mean tide, and 12 miles long, will cost \$1,207,000 with certain basins and canals. He adds that "the day is coming, if it has not already come, when the San Joaquin valley will demand a cheaper outlet for its productions than it is possible to obtain by railroad or a system of railroads, and a narrow, crooked and shallow river." The company propose to reduce the expense to \$843,000 by reducing the width 3 feet, the depth one foot, and omitting several of the basins designed for turn-outs and other purposes.

Although there is no probability of the construction of this work soon, yet just as the trade of Oakland increases, will the prospect of profit from such a canal improve. Besides if looked at critically, the enterprise has much to commend it, and Oakland can never be secure against it. Nature is favorable, and a combination of capitalists may be formed at any time to carry it out. The San Joaquin valley is now dry and most of it untilled and sparsely populated, but it has a good soil, and resources for irrigation greater than those of Lombardy, so it cannot fail in time to become populous and wealthy; and when it does, then the eastern terminus of this canal will be the centre of an important city. The capitalists who cut the canal might find an additional inducement to undertake the work, in the possibility of building up a large town on a large tract purchased at a small price. The town lots in a place of the size and business of Stockton are worth more than enough to pay for two such canals.

PROPOSED SAN FRANCISCO TERMINUS.

The Central Pacific Railway Company owns 641 miles of road in California, and 605 miles in Nevada and Utah, or 1,246 miles of completed railroad in all, and hold besides land grants from the Federal Government for 1,190 miles more, so that when finished their roads will reach from the Colorado river to Oregon. The value of their roads with their lands may be estimated not less than \$20,000 per mile, or \$25,000,000 in all, leaving their insecure land grants and franchises out of consideration. This is a large property, and the management of it so as to secure the most profit in accordance with sound business rules, requires much attention and judgment. We take it for granted that the leading directors and chief stockholders, Leland Stanford, Charles Crocker, Mark Hopkins and C. F. Huntington, intend to manage their roads on business principles exclusively, that is, so as to make as much money as possible for themselves in a reputable way. Their roads give them great influence, and their interests must not be overlooked. They have not explained those interests to the public, however; on the contrary, they manage their affairs in a very reticent way, so we must depend to a certain extent upon inference when we wish to ascertain their purposes as to the future.

It has been asserted in the Oakland papers that the Central Pacific directors have 2,000 acres of Oakland water front in their individual capacity as members of the water front company, and 500 acres in their corporate capacity, and about 400 acres of upland in Oakland and Brooklyn. Their titles in those places are perfected. They have solicited a grant of Goat Island from Congress, but have not obtained it.

THE MISSION COVE GRANT.

So far as known they own no land in San Francisco, either in their individual or corporate capacity. They hold, however, a conditional grant from the State of sixty acres of submerged land in Mission Cove, thirty acres for the Western (now Central) and thirty acres for the Southern Pacific Railroad company. On the

30th of March, 1868, the Legislature passed an Act giving the land under the condition that "unless the said companies shall, within thirty months from the passage of this Act, make the terminus of their roads upon the said premises, and expend thereon the said sum of \$100,000 each, then any grant herein contained shall be void as to the company so in default." In the Spring of 1870 an Act was passed, extending the time eighteen months; so the limitation will expire on the 30th of March, 1872. About ten months' time remains in which to do the work, upon which no commencement has yet been made.

It has been asserted that the company intend to comply with the conditions and get this tract of sixty acres; but looking at the matter in a business light, we have our doubts about that. If they have had such an intention, they ought to have commenced work long ago. They cannot build their road to the designated spot and make a proper terminus within ten months without incurring much unnecessary expense. Haste in railroad work adds greatly to cost. The Act says the company "shall make the terminus of their roads upon the said premises:" before the 30th of March, 1872, and by that language means, as we understand it, that they shall, on or before that day, have a continuous track from San Jose to that spot. It would not be sufficient to fill in the sixty acres and erect some buildings there at an expense of \$200,000, and say "this is our terminus." The law requires something more than words for the making of a terminus. There must be a station fitted for business, the track must be in a condition for use, and the cars must run. The Legislature granted four years' time for doing the work, and not for words.

CHARACTER OF THE TRACT GRANTED.

No part of the sixty acres is fit for immediate use for any business purpose. It is all submerged land, a quarter of a mile from any business houses. No building could be erected on it until a foundation had been made by piling or filling in. The piling would not support heavy structures, for the mud is in places 80 feet deep, and the longest piles would not reach to the rock, and would continue to sink under a heavy weight. Filling would be very expensive, because the water surrounds the place, and the sand and clay would be washed away on all sides. The railroad tract lies across the mouth of Mission Cove, and in such a manner that if filled in the cove will be converted into a little bay with narrow outlets, through which the tides will run with much force, sweeping away the filling. A wall of stone or cribbing of logs to confine the earth or sand would be very expensive. In the present condition of the cove, the filling of sixty acres with any material that will furnish a solid and durable foundation, will cost more than a tract large enough for terminal purposes would cost on the upland. If any filling is to be done in a place surrounded by water, the end of the Oakland wharf would be preferable; for there they have a hard bottom, and sand, if thrown down inside of a tight crib, would stay there; but in Mission Cove it would keep sinking and the mud would give way under it and rise up elsewhere, just as it does at places on the edges of the cove where filling is in progress. Besides, this sixty-acre tract does not anywhere front on the deep water, whereas at Oakland, the company have the advantages of owning the immediate water front where the steamer can lie alongside of the car, and of owning there besides a large tract of land which would receive great value from the establishment of the main terminus of the Californian Railway system in the near vicinity.

ACCESS OF THE TRACT.

After filling in the sixty acres the companies would have to lay the track to reach it. The State has granted a right of way for such a track to run from the southern end of San Bruno mountain, about twelve miles from the city, along the western shore of the bay, in some places over the waters, and at others over projecting points of upland. The largest point to be crossed is that of South San Francisco, where a tunnel more than half a mile long would be cut under a hill 260 feet high at the summit. These twelve miles of road would be very expensive. Nowhere is the work light. Deep rock cutting, filling in of submerged land, piling and tunnelling make up the entire distance. The Legislature could grant the right of way only across the submerged land belonging to the State; elsewhere,

including probably half the distance, the right of way must be obtained from individual property owners. We do not hear that any such right of way has been secured. But it would not be sufficient to make twelve miles of new road along the bay shore near the city. San Francisco would still be forty miles farther than Oakland, and to put the route on an equality as to distance, it would be necessary to run a road twenty miles long from Niles to Redwood, crossing the bay near the latter place. We presume that the Legislature would permit this, though it would obstruct navigation to Alviso. Then the distance from Sacramento by way of Stockton would be the same to San Francisco as to Oakland.

The completion of all this work in an economical manner would require at least eighteen months; and as the Directors of the Central Pacific Railroad Company are men of much business capacity and experience, we must assume either that they have no intention to run their cars to a terminus at Mission Cove before the 30th of March, 1872, or that the intention has been adopted lately.

INJURY TO OTHER PROPERTY.

It is impossible to make the distance to San Francisco less than to Oakland, and to reduce it to an equality requires the construction of thirty-two miles of new road, mostly in tule or in the bay, at great expense, and the effect would be to destroy, or at least reduce the value of, other roads already in existence belonging to the same company.

The value of the Central Pacific Railroad Company's property at Oakland depends almost entirely upon the terminal business. When that ceases, the water front will become worthless. The Directors, according to current rumor, in their corporate and individual capacity have 2,800 acres or more in and near Oakland, and they have expended \$1,000,000 in improvements there. Is it probable now that for the sake of sixty acres in San Francisco, unfit for use until after a great expenditure, they will depreciate the value of 2,800 acres in Oakland?

The law says the grant of 60 acres at San Francisco is made on the condition that the Western and Southern Pacific Railroad Company (now represented by the Central) shall make "the terminus" of their roads there. It does not say "a terminus." This language suggests doubt whether the grant could be claimed without an abandonment of the Oakland terminus. There is at any rate room for litigation and for public excitement which it is policy for the company to avoid.

THE SHORT CENTRAL ROUTE.

We have already mentioned the proposed short route or air line road from Sacramento to Oakland. This line is to cross the Sacramento river near Sacramento city, run in a straight line southwestward over the tules, cross the outlet of the Sacramento basin near Antioch or near Benicia and reach Oakland in 80 miles. The company have indicated their intention to build their road, by the making of a survey which is about completed; and various publications which have the repute of being made with the approval of the Directors have said they will build it.

The construction of the road would not pay for the way trade. The tule northward from Suisun Bay on the line is unoccupied and unproductive. South of Suisun Bay the line will be hilly. Everywhere the work will be costly; the line will be near navigable water traversed daily by steamers, and will be between two other railroads not far distant and connecting the same terminal points. These facts preclude the idea of reliance for profit upon way trade. But if the road is to be built to accommodate the through trade, as the railroad organs declare, what would be the use of a terminus in Mission Cove? Passengers will not go 80 miles by rail to reach San Francisco after arriving at Oakland. It would scarcely pay to send freight around that distance. Transshipment by the ferry boat would be preferable. This short route reaching Oakland from the south in 80 miles from Sacramento and at once taking all the through trade of the Central Pacific Railroad Company would place the unfitness of San Francisco for the chief railroad terminus in a stronger light than ever. We are not prepared to believe that the company will build this short route and also make a terminus at Mission Cove. The two projects do not harmonize, and we prefer to believe that the San Francisco terminus will not be built.

THE AMERICAN NAVY.

Our nation ranks next to Great Britain in the tonnage of commercial marine, and although our shipping and ship-building interests have suffered a great decline in the last ten years, yet our position, our wealth, our extensive sea coasts, and our resources in iron, timber and skilled labor, make it certain that at no distant time we must take a far higher place than ever in commerce of both oceans. A navy is necessary to all civilized nations; it is a powerful agent for preventing invasions, and making attacks, and it is free from many of the dangers that arise from the concentration of large land forces. The American navy is relatively very small; its tonnage is only a little over one percent. of that of our commercial marine, while in England the navy has nearly five per cent. and in France twelve per cent. In other words the French navy is relatively ten and the British four times larger than the American navy. We had in 1869, 57 ships in commission, measuring 55,455 tons; the British 191 ships of 328,614 tons, and the French, 159 ships of 250,000 tons. It is useless to attempt any comparison on the number of guns, because by the late improvements in making cannon the number of pieces has become a matter of little moment.

INEFFICIENCY OF OUR NAVY.

Not only is our navy small, but it is shockingly inefficient. The annual report of the Secretary of the Navy, for 1870, contains a report made by the Naval Board of Examiners, who say that our navy is in a "lamentable condition" as to ships, and that we have not a single vessel fit "to cruise in war with an impunity commensurate with her class." This implies that some of them might make a respectable fight when attacked, but that not one could go out to sea and overtake a first class British or French vessel of the same size, with any hope of taking her. The sailing and fighting qualities are not combined as they should be. The Naval Board of Examiners consisted of Admiral Goldsborough, Commodore Boggs and Isaac Newton, and the two first are men of high reputation. In his official report for 1870, Admiral Porter expresses himself to the same effect.

Not only were their sweeping condemnations of the navy presented to Congress by Secretary Robeson without a question of their accuracy, but in neither House of Congress did anybody venture to raise any question; and Secretary Robeson in his own report confirms the statements. He said that we have not one first class sea-going ironclad nor one swift cruiser fit to overtake and fight such a vessel as the Alabama. He used the following language in 1869:

It is the habit of every foreign nation making any pretension to maritime power, to keep on every station one or more powerful sea-going broadside ironclads, against the force of which our wooden vessels on the same station would be powerless. In the event of a war, our ships would be uselessly sacrificed, or obliged to find safety in neutral ports, or abandoning the sea and leaving our commerce to its fate, to seek on our own shores the protection of our monitors and forts. It is not doubted that any war with a foreign enemy must be a maritime one. The American people are accustomed to success on the ocean, and they would have little cause and less inclination to forgive a policy which, at the first sign of a foreign war, sent our navy hurrying ignominiously to our shores.

Yet we have not, at this time, on any foreign station, a squadron whose combined force would avail for a day against the powerful sea-going ironclads which both France and England have on the same stations.

NAVY YARDS.

Navy Yards are necessary for the construction and repairs of war ships, and for the storing of material to be used by the navy. There are eight yards in the United States; one each at Portland, Boston, New York, Philadelphia, Washington, Norfolk, Pensacola and Mare Island; seven on the Atlantic and one on the Pacific side, though nearly half the war ships and more than half the coast line of the country is on this side of the continent. Not only are the Atlantic yards more numerous, but most of them are better fitted up and are prepared for doing more work than our own. All of them, however, are in a shabby condition. Secretary Robeson, in his report for 1869, said:

The great maritime powers of Europe have immense establishments, built and maintained at great expense, and furnished with every means for the rapid construction and fitting out of their fleets. The first official act of my immediate predecessor was the appointment of a Board to examine and report the condition of our Yards, and I have myself visited and inspected most

of those on the Atlantic coast. They are generally of small capacity and ill-adapted to meet the requirements of modern naval construction. Some were established at a comparatively early date, apparently not providing for the future, and are not, in the present position, susceptible of much improvement; and others, though of larger capacity, are at present poorly supplied with the means of rapid work. We have seven regularly established Navy Yards. Not more than two of these are capable of fitting out more than two or three vessels at one time.

IMPORTANCE OF MARE ISLAND.

As we have only one yard on the Pacific and in time of war it might be called on to refit a number of vessels belonging to the Pacific squadrons, and as we lack here the great factories and supplies of machinery and materials found in the Eastern States, it is especially important that Mare Island should be fitted up in the most complete style, at least equal to any yard in foreign countries.

The report of the Secretary of the Navy for 1870 contains a report of Admiral Porter, who said:

Mare Island is destined in time of war to be the most important of our dock-yards, and I therefore beg leave to invite your particular attention to it. It is evident that in the future all of our ships in the Pacific will have to depend upon the Mare Island Navy Yard for repairs. The passage around Cape Horn, at the end of a three years' cruise, should not be attempted, and it will be found much more economical to fit out vessels for China in California, by which they avoid the long passage around the Cape of Good Hope, via Brazil, or the troublesome and expensive one through the Suez Canal. By the Cape of Good Hope route the passage from New York to Hong Kong cannot be made in less than one hundred and ten days, or by way of the Suez Canal in less than sixty-five days, while the voyage from San Francisco to the same point can be performed in twenty-eight days. This is at once an argument in favor of fitting vessels out at Mare Island for all parts of the Pacific and for the Asiatic coast. The argument holds good also for laying the vessels up there, and they can reach California from the China seas quicker than they can the Eastern coast of America, to say nothing of the wear and tear of the longer voyage, and the anxiety of coming on our stormy coast in the winter, which they will escape. Several of the European powers are making preparations to establish repairing stations in the East, if they have not already done so, while we need not go to such an expense if we provide the facilities for repairing the different vessels at Mare Island.

I have no doubt that in a few years we shall be able to build as strong and cheap vessels in California as on the Eastern coast, for labor is gradually approximating in price to the same commodity in the Atlantic States. There are required at Mare Island machine shops, tools, several docks, store-houses, quarters for officers, and war material of all kinds, for the supplying of vessels. It would be a wise economy to make ample appropriations for the above objects at once, for many of the objects required have to be sent around Cape Horn to save freight, while the tools and pieces of machinery, which can be made in San Francisco, require time to get them ready for use. It is important that skilled labor in ships and steam machinery should be encouraged in that quarter, so that the Government can depend on a sufficient number of mechanics in the hour of need. We have every evidence that the work performed in the California Yard is equal to that done in other yards, even with the poor facilities it possesses at present, and it is not likely that the work will deteriorate when the facilities are improved. It may appear to you strange that ships of war are so much longer fitting at Mare Island than at other naval stations. I can account for this circumstance from the fact that the Yard has not been supplied with the requisite tools and machinery possessed by the others, and yet a force amounting to one-fourth of the entire navy in commission has been fitted out here since March, 1859.

SQUADRONS AND CRUISES.

Our navy is divided into five squadrons. The Pacific Department, including the western coast of America, Polynesia and Australia, has 12 vessels and 128 guns; the Asiatic department including the Asiatic, Malaysian and African seas from Kamschatka to the Cape of Good Hope, has seven vessels with 88 guns; the North Atlantic, including the coasts from the mouth of the Amazon to Greenland, has 14 ships and 79 guns; the European, including the western coast of the old world north of the Equator, has 8 vessels and 129 guns; and the South Atlantic, including both coasts of that ocean south of the equator, has 4 ships and 41 guns. Our war ships are fitted up to cruise for a period of three years. The men are enlisted for that time and the ammunition and stores not perishable are calculated to last for that period, and as it takes many months for a ship to reach a distant station, if the cruises were shorter most of the time would be lost in the outward and home voyages. For many years it was customary on account of lack of supplies and machinery and the high price of labor at Mare Island, to send the ships of the Pacific and Asiatic squadrons to Atlantic Navy Yards to be refitted at the end of every cruise, thus consuming about one year out of three in a long, uncomfortable and useless voyage; and most of the Asiatic ships still make that costly trip. All the war ships of the country stationed in the Pacific hemisphere should be refitted at the Pacific Navy Yard, in the opinion of Admiral Porter and the

present Secretary of the Navy; and when the Government acts on that opinion, and puts our navy on an equality as to strength and efficiency with that of Great Britain, there will be steady work for years at Mare Island for 10,000 men; whereas the largest number employed heretofore has been 2,000, and they were retained only a short time, the average being 500 to 1,000.

IMPROVEMENTS NEEDED.

The *Alta California* in an article published several months ago said:

At the last session of Congress, a resolution was introduced to abolish all the Navy Yards on the Atlantic save two, but no action was taken upon it. It is to be hoped that it will pass, and that the two retained and the Mare Island Yard on this coast will then be put into the highest condition of efficiency and supplied with all the material requisite for defense even in remote contingencies. We have endeavored to find a detailed statement of the docks, machinery and material at Woolwich, Cherbourg, and other Navy Yards of Britain and France, but did not succeed. We know, however, that each has more machinery and material than all the American Yards put together. The British Yards furnish employment to 20,000 artisans in ordinary times, and twice as many in exceptionally busy seasons. The Cherbourg Navy Yard has cost \$81,000,000 for permanent improvements, and with the low wages paid in France that sum represents more than twice as much labor and material as it would in California. We have no statement of the total expenditure for permanent improvements at Mare Island, but we should guess, from appearances, that it might be \$1,000,000. There are some dwellings for officers and buildings for workshops, but as to machinery or material there is very little. There is a boiler shop, but for lack of a wharf near it, the transportation of a boiler to be repaired from a ship to the shop costs nearly as much as the transportation of the boiler from New York to Mare Island. Instead of having machinery and material for constructing half a dozen large ironclads at once, there is not enough of either for the convenient building of a small wooden vessel. In fact, we are almost helpless; and such security as we enjoy on this coast against aggression is due, not to our strength, but to the pacific disposition or interests of the great naval powers of Europe.

After inquiry among those familiar with naval affairs, we have prepared the following list of those improvements most needed at Mare Island at the present time, and indispensable for the proper and economical repairing of the vessels now in our ocean, as well as for the construction of new men-of-war. The cost placed opposite the different improvements is estimated approximately:

Stone dry dock.....	\$1,500,000
Mast House.....	120,000
Boat shop.....	30,000
Rigging and sail loft.....	60,000
Timber and lumber store sheds.....	180,000
Building for ordnance establishment, machinery, etc.....	300,000
Ship houses, launching ways, etc.....	250,000
Carpenters' workshops, with machinery, etc.....	120,000
Storehouses.....	180,000
Chain cable and anchor shop, with machinery.....	270,000
Iron-plate shop, with machinery.....	300,000
Completion of foundry and machine shop.....	200,000
Wharves, slips and hoisting cranes.....	500,000
Completion of provisions and clothing establishment.....	150,000
Office buildings and dwelling-houses.....	114,000
Miscellaneous buildings and machinery, water works, etc.....	500,000
Grading and road-making.....	132,000
Contingencies.....	300,000
Total.....	\$5,226,000

Even if Congress should allow our navy to remain in its present relative inferiority and should neglect to provide machinery and material at the yards in time of peace, so that we might build, repair and supply vessels expeditiously in case of war, still Mare Island must in any event increase in importance with the growth of the navy and the development of commerce of the Pacific, and be a source of perennial profit to Vallejo.

THE NEEDS OF OUR TOWN.

If we have stated the absolute and relative advantages of Vallejo correctly, our readers will agree with us that the town has at least a possibility of becoming a great city. The conversion of that possibility into a fact, would be greatly hastened by such assistance as capitalists could give with benefit to themselves. The land of Vallejo within a radius of four miles from the railroad, is worth now about \$4,000,000; and the land of San Francisco within an equal area is worth \$150,000,000. The expenditure necessary to make the land of the former equal in value to that of the latter would in our opinion, not exceed \$50,000,000, and this sum invested in railroads, water works, houses, and wharves, would pay a

good direct profit, as well as a much better indirect profit, by increasing the value of land. If this opinion is sound, the speculation is magnificent. The amount is immense, but so is the reward. We submit the idea to capitalists and suggest they take the advice of engineers upon it.

We do not consider so large an expenditure indispensable; in fact we are satisfied that without any farther aid from great capitalists, Vallejo would now gradually work its way up to the first place among the cities of California. But as we have said, money can hasten our growth. The improvement most needed is a railroad to New York. At present the Central Pacific Company find a profit in preventing any of the trans-continental travel from passing through our town; and as they have great power in their hands, it is used to our injury. We do not complain of them, for they do no more than other railroad companies generally do under similar circumstances. But we should put them, if possible, in such a situation that we can either take all their business, or compel them to bring it to us. They will be in that situation when the Eastern Extension of the California Pacific Railroad is built, as proposed. The construction of that road will to the general public be convincing proof that Vallejo is to be the metropolis of California.

The completion of the Sonoma road to Bodega, Mendocino and Humboldt Bay will also be extremely beneficial to the town. The richness of the soil, moisture of the climate, the excellence of the natural pastures, and the immense forests, will attract a large population as soon as railroad communication is opened. These forests are probably unparalleled in their value. They are dense, and the trees are of great height and thickness, and of an excellent quality, mostly redwood, which is preferred to any other on our coast for finishing and positions in which durability is required. They extend back thirty or forty miles from the ocean and in many places will remain untouched until made accessible by rail. The scarcity of this kind of timber elsewhere, and of any kind of timber in valleys, will contribute to make Vallejo the chief centre of the lumber trade of the State.

It is questionable, however, whether Vallejo has greater immediate need of railroads or water. The latter can be supplied at much less expense and would perhaps render quite as much service. If an aqueduct with a capacity to carry all the surplus water of Clear Lake basin to Vallejo were built, the town would very soon be filled with factories, and these would attract population and capital, and make business. There is a great lack of a good site for factories—such a site will be supplied when the waters of Clear Lake—not less than 40,000,000 gallons daily, run into Vallejo.

The present main water supply of the town is obtained about five miles distant. The Vallejo City Water Company have constructed their works, and claim that in ordinary seasons they can supply 3,000,000 gallons daily. They have a reservoir with an area of 100 acres, a dam 30 feet high, an elevation at the bottom of 170 feet above tide level, and a capacity of 2,000,000,000 gallons. The water is mainly to be derived from the rain fall, on a catchment area of 5,000 acres; for there are no constant streams on the land or only very small ones. Other supplies of water, however, farther up in the mountains, can be obtained and brought into the reservoir.

The water front needs improvement, and we incline to the opinion that the best plan will be to have no projecting wharves which check the current and facilitate the deposition of mud. With a smooth and tight bulkhead made of stone or durable wood, the shipping will find sufficient accommodation and the harbor will be protected against encroachment.

About 150 feet from the water line there should be a wide street, running the whole length of the front. This street should have a railroad track open to every road running into the town and should have switches leading off to the water edge, at every point where business will justify the expense. Between the street and the water, warehouses should be built so that freight can be transferred from the ship to the point of storage by passing not more than ten steps.

At present our town lacks fine houses, elegant gardens, and smooth pavements. Our site, our soil, and our climate give us the opportunity to make a beautiful city, and we shall do all in that respect permitted by our business and circumstances. We need fine macadamized roads to the Vallejo Sulphur Springs, to Benicia, to Napa, and to many other places in our vicinity attractive for consider-

ations of business or pleasure. We also need a horse railroad to Benicia, which is five miles east of Vallejo, on the bank of the Strait of Carquinez, and has been supposed by some persons to have a better site for a city. The two towns are separated by hills and the two harbors by a bluff point. Benicia has a wider anchorage, but the solid upland is uneven and it is separated by marsh from the water front, so that considerable sums will be required to grade the streets and prepare the lots near the water for convenient occupation.

NEWSPAPER OPINIONS.

An opinion, entertained by only a few persons, and rejected by the great majority of those who have examined it, is presumptively unsound. On the other hand, if the majority, especially of the intelligent men, adopt an idea, that fact raises a presumption in its favor. We believe most of the disinterested intelligent men in California now regard the commercial position of San Francisco as very insecure. We quote the following extracts from various newspapers about San Francisco or Vallejo:

[From the San Francisco Bulletin, October 30, 1869.]

The district that Vallejo can and will control is large enough, fertile enough and soon will be populous and productive enough to realize for that town a leading position among interior cities. It is larger and has more resources than several entire States.

[From the San Francisco Bulletin, January 5, 1869.]

Vallejo has gained largely in population, wealth and improvements during the year, by the completion of the California Pacific Railroad to Sacramento, and will gain more by the extension of the road to Marysville, connecting with the Oroville Railroad, and traversing the most populous and productive portion of the Sacramento valley. The place is destined to be one of the leading cities of the future.

[From the San Francisco Bulletin, May 22, 1871.]

Vallejo will be an important railway centre as well as a considerable shipping port.

[From the Morning Call, October 28, 1869.]

The experience of the present year demonstrates what was long since predicted, to-wit: That the railroad commerce north of the Straits of Carquinez, would concentrate at Vallejo or Benicia unless the Straits of Carquinez be spanned by a bridge. * * * We confess that we do not see the economy of bringing grain and other produce destined for shipment seaward all the way round the bay.

[From the San Francisco Alta California, June 13, 1871.]

If completed as proposed, it [the California Pacific Eastern Extension Railroad] will contribute much to the prosperity of Vallejo, which seems secure of considerable growth in any event.

[From the San Francisco Chronicle, November, 1870.]

If the tide of commerce changes as rapidly against San Francisco during the next two years as it has during the last one, we may expect to see Vallejo import direct.

[From the San Francisco News Letter, May 27, 1871.]

So far as there is any rivalry between Vallejo and Oakland for commercial position, the latter may as well give up the contest.

[From the Sacramento Union, December 25, 1868.]

The questions in which all concerned are most interested in solving, are: Can San Francisco ever become a railway centre for this State? and would it not inflict a great wrong upon the future to arbitrarily make her what from her position she never was intended for, when there is another and incomparably better locality?

[From the Sacramento Union, December 11, 1868.]

Of course when the world's trade passes through California at the rate of a million tons per year, it will seek two things, the quickest and the cheapest routes. We think both these would be secured by making the great commercial depot and railway centre at the Straits.

[From the New York Commercial Advertiser—date lost.]

She [Benicia] has as large a port as San Francisco, with an immense territory at her back to be traversed with arteries terminating at her door, while San Francisco is comparatively isolated from all but the ocean, with nothing in the rear, and confronted by the increasing shadow of her rival.

[From the Stockton Independent, December 5, 1869.]

Stockton and Vallejo are situated at points that, with proper enterprise and industry, will make them commanding positions for nearly the whole of the interior trade of the northern and southern portion of this State.

[From the Chico Courant, December 12, 1869.]

Let her [San Francisco] change her course, and like Chicago send her iron arms into the country and open up the State, and bind it to her with iron bands, or she will see a city opening up at Vallejo or some other point on the bay, that will not only be a rival, but will eclipse her.

[From the Oakland Transcript, January 17, 1870.]

A cursory examination of the yet incomplete railroad system of California, and a little study of the comparative importance of railroad and deep sea commerce, will convince any intelligent person that San Francisco will lose a large proportion of her present and prospective trade, unless her people bestir themselves.

[From the San Jose Patriot, November 1, 1869.]

Railroads make cities, and where a place becomes the centre of a system, tapping all portions of a great and rich State, and the terminus of a line crossing a continent, its rapid growth may be considered assured.

[From the Sacramento Bee, November 9, 1870.]

For a year past the shipping business of San Francisco has been rapidly falling off, while Vallejo has been successfully bidding for it by offering low rates of wharfage. At first imperious San Francisco, which—as one of our most gifted orators once said—“has risen from the land and sea, as if by the stroke of some enchanter’s wand,” hooted the idea of ever having a commercial rival on this coast; but time has shown that she was mistaken.

[From the San Mateo Gazette, January 28, 1871.]

It is quite probable that all freight coming from China, Australia, and the Islands of the Pacific, and intended to go by rail to the Atlantic States or Europe, will not stop at San Francisco wharves at all.

[From the Sacramento Reporter, July 1, 1870.]

In a very short time the grain trade, save perhaps that of San Mateo and a part of Santa Clara county, must entirely leave San Francisco.

GEN. PERSIFER SMITH.

It is well known that the officers of the army and navy in 1849, including Gen. Persifer Smith and Commodore Jones, the highest officers in their respective departments on this coast gave their opinion that the chief city of California should be at the strait of Carquinez, and in accordance with that advice, the headquarters of the Department of the Pacific were established at Benicia, where the Government still has barracks and a large military reservation. On the 5th of April, 1849, Gen. Persifer Smith, after having been in San Francisco a short time, wrote thus to the Adjutant General at Washington:

The town of San Francisco is in no way fitted for military or commercial purposes; there is no harbor, a bad landing place, bad water, no supplies of provisions, an inclement climate, and it is cut off from the rest of the country, except by a long circuit around the southern extremity of the bay. In time of war, enemies’ troops could be landed many miles south of the entrance of the bay on the sea beach, and thus cut it off by a short line across the peninsula on which it stands. There are points on the bay, more inland, having good harbors and landings, good water, and open to the whole country in the rear, and accessible without difficulty to vessels of the largest class. I propose to go to-morrow in the Edith, with Commodore Jones and other officers of the army and navy, to examine the Straits of Carquinez, said to combine most advantages.

On the 9th of April, Gen. Smith again wrote, as follows:

“We anchored at the upper end of the straits of Carquinez. The distance of this point from Sausalito is about twenty-one miles, and from the sea twenty-four—showing that, with a fair wind, a vessel could easily come in from the sea and reach this point in one tide. The channel is generally from two to five miles wide. The officers of the coast survey, and such staff officers as were present, were all of the opinion that there was a perfectly good and sufficient beating channel without obstruction for vessels of war of the largest class from sea to the upper end of the straits of Carquinez. * * * The straits are about five miles long and from one to two broad. Near the lower end the land is bold and high on both sides; half way up on the north side, the hills recede from the water, leaving a very favorable site for a town larger than is likely to exist anywhere here for a century to come; and on this inclined plain a town is now laid out called Benicia. As this point (straits of Carquinez) has in my opinion, so many advantages over any other on the waters of the bay, for commercial, naval, and military purposes, I would respectfully suggest the laws to be proposed for establishing ports of entry, depots, admiralty courts, etc., should not name the points of location, but leave them to be selected by the President.”

COMMODORE JONES.

Commodore Ap Catesby Jones of the American Navy, who agreed with Gen. Persifer Smith in regarding Benicia as the proper site for the commercial emporium of California, made no secret of his opinions and expressed them in letter to the Navy Department, but we have not been able to obtain possession of them,

and therefore we cannot quote his precise language. So confident was he that Benicia would soon be the chief city, that he invested a considerable amount of money there, (and as the result proved) most unprofitably. The capital was already fixed in San Francisco and no railroads had been built to make a revolution. If the means of communication between San Francisco and the interior were to continue the same as they were twenty years ago, we should not predict much progress for Vallejo.

ADMIRAL FARRAGUT.

Admiral Farragut was stationed at Mare Island for years as Commandant of the Navy yard, and in that position he had an opportunity to study the resources of Vallejo, and to learn the opinions of intelligent engineers and navigators in regard to them. His opinion formed with these helps was that Vallejo was the best place in California for the purchase of real estate, and consequently he bought a large number of lots which were a source of much profit to him. At the time of his death he was one of the chief owners of land in the town and the lots still form a large part of the considerable estate left to his heirs. He was in the habit of expressing his opinions in regard to the future greatness of the town very frankly, but we have not learned that he ever committed them to paper.

ADMIRAL CRAVEN.

Rear-Admiral Thomas T. Craven, U. S. N., who was Commandant of the Mare Island Navy Yard for a time, and now a resident of Vallejo, has expressed his opinion thus:

Vallejo and Benicia by their geographical positions and great water front, are the only places which have any natural advantages for the transaction of a large commercial business. San Francisco and Oakland are badly located, and they owe their present state of prosperity to—we might justly say—blind luck. So well satisfied am I that Vallejo is to become within a few years one of the first commercial towns of this State, that I have disposed of all the property I had elsewhere, and invested every cent I could gather within its limits.

CAPT. C. T. BALDWIN.

We give below an opinion from Capt. C. T. Baldwin, U. S. N., now Executive Officer of the Mare Island Navy Yard, and also a partner in a leading importing house of San Francisco, a gentleman of high reputation in his naval and commercial professions. He was selected during the civil war to defeat the Alabama, and for that purpose was put in command of the Vanderbilt, the swiftest steamer sent out to pursue the rebel cruiser, which, however, avoided him. Capt. Baldwin writes thus:

I have no hesitation in saying that in natural advantages I consider Vallejo as only second to San Francisco, and in some points it is even better situated. The harbor is perfectly safe and has sufficient depth of water for the largest size ships, while it has every facility for railroad communication with the northern part of California, as also Oregon. The brackish water of the river on the ebb tide, kills the teredo—a great advantage. The climate is excellent, and now that an abundance of good water is introduced, I see no reason to doubt that manufactures of various kinds will be established.

In my opinion, within five years Vallejo will be, in population, the second city of California.

CAPT. S. R. FRANKLIN.

Capt. S. R. Franklin, U. S. N., stationed at the Mare Island Navy Yard as Chief of Ordnance, says:

I know of no place in California, or indeed, anywhere, that possesses greater advantages for commercial prosperity than Vallejo. It is plain to any observer that it is the natural outlet to the great grain valleys; and all the products of the fertile valleys of Sonoma and Napa will eventually find this their way to the sea; nor would it surprise me if the day should come when it will be the terminus of the great trans-continental railroad. As there is a prospect of an abundant supply of water being introduced into the place from Clear Lake, it strikes me as being a most favorable point for the establishment of manufactories.

It is a rare thing to find a place twenty-seven miles from the ocean with so fine a water front, I believe the day is to arrive when it will be lined with warehouses and wharves, and that vessels loaded with grain will take their departure from them for every portion of the globe.

A great deal might be said upon this subject, but the foregoing embodies my views and I think those of most persons who have at all given the matter reflection.

ADMIRAL ALDEN.

EDITOR CHRONICLE: I expect to receive within a few weeks a written opinion from Rear-Admiral Alden in regard to the advantages and prospects of Vallejo, and meantime I can say from hearing them frequently expressed, that they are highly favorable to the future greatness of your city, and that they agree generally with the opinions of Admirals Farragut and Craven as published in your paper.

J. P. JACKSON.

James Alden, before reaching his present rank was, for many years in charge of the U. S. Coast Survey on this coast, and he is the highest official in rank of all those who have been in that branch of the service. His opinion may therefore be regarded as the most authoritative that could come from the Coast Survey Department.

CALVIN BROWN.

CIVIL ENGINEER'S OFFICE, NAVY YARD, MARIE ISLAND, CAL., JUNE 20TH, 1871.

The question of the manufacturing and commercial position of Vallejo which you propose to me I would answer as follows:

I may be excused for introducing here a hasty sketch of the origin and growth of the impressions which have been made upon me by my first acquaintance and consequent association with the locality of Vallejo. I came here in 1861, and soon after my arrival took various opportunities of visiting about in the portion of the State lying to the north of us, and was much struck with the large and fertile extent of the territory which, immediately connected with this point, appeared to have its only tide water outlet thereat. This fact suggested the question of means of communication by roads and railways with different points, and herein the topography of the whole country revealed extraordinary facilities for routes of entire feasibility, unbroken by bays, marshes or other impediments of a difficult and costly nature, so that it seemed that almost any extension of communication might easily be had, not only to any part of our coast, but with the Eastern States. The overland railroad was not then built, but it was then my firm conviction, when the hugbear of impracticability got out of our people's heads, it would almost of necessity start from Vallejo, or at least inevitably pass through it. As a railroad centre, I believe Vallejo will constitute one of the most important in the State, for the reasons intimated in these observations.

As a shipping point there is no need of my alluding to Vallejo. Everybody knows its connection with one of the largest and most important agricultural regions of the coast, wherein wheat and other productions for exportation are abundantly raised, and that the outlet for these is upon the shore of tidal waters deep enough to float the largest ships, surrounding a harbor perfectly safe from rocks shoals and storms, and with ready access to the ocean. The United States Government, in adopting the locality for a Navy Yard, affords complete evidence of the fitness thereof for all purposes of navigation, while the large and productive country back of it affords the best guarantee of the existence of business materials that must call for their accommodation in the means which the development of the harbor will supply.

As a manufacturing point, I fully believe in Vallejo. In the view of the certainty that manufactures must sooner or later reach a development corresponding with the habits and necessities of our people, and that they have hitherto been kept back by the cost of steam motive power, and are awaiting the advent of more economical motors, it appears to me that the inauguration of a manufacturing system in one locality must occur at this point. In the country back of us we have sources of water power which, to the like extent and availability, are in no other part of our State immediately connected with tide water and convenient mill sites, and a skilled mechanical population; the raw materials are around us and need only the application of capital and skill to work them into desirable shapes.

In the matter of a comparison between Vallejo and other improved localities in our State, I do not consider it necessary to enter; its position controls all the advantages of increase and growth, and its most progress according to the appreciation of this fact by enterprise and capital. The most important point to be observed, however, in this connection is, that while other places require large outlays of capital to make the harbors available, the waters of Vallejo are so admirably joined to its shores, as to lines and depths, that simple wooden piers are all that are required for the accommodation of ships of the heaviest draughts. State undertakings to make harbors and "sea walls" will never be called for by the citizens of Vallejo.

CALVIN BROWN.

Calvin Brown is one of the ablest and most experienced civil engineers in the service of the U. S. Naval Department. He has had charge of the construction of many extensive and expensive works in the Eastern States, and has been the consulting and superintending engineer of several important enterprises in California.

C. F. REED.

Charles F. Reed, Republican nominee for Surveyor General of California in 1867, has not had time to write out his opinion for us, but he authorizes us to say that it is favorable to Vallejo, and that he accepts generally the views of Calvin Brown, as expressed above.

SURVEYOR GENERAL J. F. HOUGHTON.

SACRAMENTO, JUNE 29TH, 1871.

A residence of upwards of twenty-one years in California, during six years of which time I occupied the position of Surveyor General of the State, has made me familiar with the entire State, and enables me to answer with some degree of correctness the interrogations contained in your letter of yesterday.

You first ask how the natural advantages of Vallejo compare with those of San Francisco and Oakland for the transaction of a large shipping and railroad business. In answer, I will say: That for the purposes indicated in this inquiry, two conditions are absolutely essential: First, a good harbor, and second a practicable route for a short railroad communication with the great producing districts of the State.

San Francisco possesses the first of these in an unlimited degree, with unlimited area, and good anchorage; the only serious objection being that its wharves and piers as a matter of economy, owing to the great depth of the accumulated mud deposit in front of the city, have thus far been and must for a long time be, mostly constructed on piles, which are subject to the terrible ravages of the teredo, rendering them totally unreliable for sustaining great weights after about five years.

Her location upon the extreme point of a narrow peninsula forty miles in length, requiring a detour of about eighty miles around the Bay of San Francisco to accomplish a direct distance of twenty towards the great Sacramento and San Joaquin valleys, is such that although there are connecting lines of rail owned and operated by the Central Pacific Company for local trade over the route, no through freight or passengers pass over them.

The detour referred to accomplished, the great Mount Diablo range of mountains still separates it from the two great valleys and the overland route, requiring long and high grades to surmount it. In fact except by bridging the great bay of San Francisco, no railroad route from San Francisco to the interior is practicable.

Oakland lies on the Bay of San Francisco directly opposite the first named city, and has a very decided advantage over it in the way of railroad route to the interior, but in the other essential of good harbor it is entirely deficient, no water of sufficient depth for ordinary shipping being found within two miles of the city water front, as the wharf of the Central Pacific Railroad Company eleven thousand one hundred and fifty feet in length clearly testifies. I would also add that all that great grain producing portion of the State, lying north of the Golden Gate and west of the Sacramento river, is shut out entirely by the intervening bays from direct rail communication with either of the cities before named.

Vallejo by its location at the head of San Pablo Bay has the shortest and most practicable route to the interior, of any of the cities named, avoiding the detour and the mountain range, making its distance to Sacramento sixty miles, against one hundred and thirty-five from Oakland and one hundred and seventy-three from San Francisco. Its harbor is completely land locked, easy of access, with good anchorage, with capacity sufficient for the commerce of any city in the world, and entirely free from the ravages of the Teredo or other destructive influence upon its piers and wharves, and if as you assume in your second interrogatory, San Francisco must eventually lose some portion of its foreign commerce, (which seems almost a certainty), I know of no place, in view of the energy displayed by the railroad companies now engaged in connecting the Sacramento, Russian River, Napa and other valleys, and all that country north of the Bay of San Francisco, so likely to secure it as Vallejo the terminus of all their roads.

The waters of Clear Lake which may easily be brought to Vallejo, would not only supply the inhabitants of a great city with an abundance of purest water, but would furnish a large supply for manufacturing purposes, which neither San Francisco or Oakland can do without an enormous outlay, as a contemplated project of taking the water of Lake Tahoe to those cities a distance of about two hundred mile abundantly proves.

In view of all these advantages it seems certain that the rapid progress of the past two years will be continuous, and that at no distant day Vallejo must occupy a much more prominent position in the commerce of the Pacific Coast, as a central shipping point for the produce and supplies of three-fourths of the interior population of the State of California.

J. F. HOUGHTON.

J. F. Houghton is a civil engineer of high standing in his profession, and filled the position with credit to himself and the State.

G. F. ALLARDT AND PROF. HOFFMAN.

In answer to your queries I reply that Vallejo Bay is fitted by its area, depth and convenience of access from the sea to accommodate an extensive marine commerce. The town has an excellent situation as a terminus for the railroads north of the latitude of Carquinez, to be the main seaport and outlet of all that part of the State. Fresh water, fuel and timber can be brought in at comparatively little expense. The cheapness of these important materials combined with the natural excellence of the water front, the abundance of level upland and the low cost of durable wharfing will favor the establishment of extensive manufactures. My opinion is that Vallejo will rank high at no distant time among the cities of the Pacific Coast of this continent.

June 14, 1871.

I concur substantially in Mr. Allardt's opinion as given above.

CHARLES F. HOFFMAN.

Mr. Allardt is Chief Engineer of the State Tide Land Survey, and in that capacity has had occasion to devote much study to the Bay of San Francisco and its

tributary waters. In official position and in professional reputation he ranks among the first civil engineers of the State.

Charles F. Hoffman, who concurs with Mr. Allardt, has been the chief topographer of the State Geological Survey since its organization, and in that capacity has devoted eight years of study to the topography of California; and upon that subject he is the highest authority. His maps are the best of the kind yet made in the New World. His reputation is not confined to our State, but is known also in the Atlantic, and he has lately been elected professor of topographical engineering in the scientific school connected with Harvard University.

A. W. VON SCHMIDT, C. E.

A. W. Von Schmidt, who gained a national reputation by the originality and success of his plan for removing Blossom Rock, and who has devised and carried out many other important engineering enterprises, gives us the following:

Vallejo has many important natural advantages for the transaction of commercial business on account of the convenience of access both by land and sea; and when furnished with fresh water in great abundance, as it certainly will be at no distant time, it will be an excellent point for manufactures. In my opinion the place is worthy the most favorable consideration of capitalists disposed to invest money on our coast.

A. W. VON SCHMIDT, Civil Engineer.

ROBERT L. HARRIS, C. E.

Robert L. Harris, Chief Engineer of the Northwestern Construction Company, which is engaged in building the Northern Pacific Railroad, gives his professional opinion of the prospects of Vallejo, thus:

I consider Vallejo one of the best town locations in the State; and if the foresight, enterprise and public spirit heretofore manifested by its leading citizens continue to be exerted by those who have more recently become interested, it will occupy a very prominent place in the wealth and business of California.

JOHN WALLACE, C. E.

John Wallace, Civil Engineer, and County Surveyor of San Joaquin county, gives his professional opinion thus:

For transacting a large shipping and railway business, Vallejo has natural advantages equal to San Francisco and surpassing those of Oakland.

Vallejo has better prospects of becoming an important seaport than Oakland; in fact I should not consider the position of Oakland as calculated to become any seaport at all.

If the waters of Clear Lake could be brought to Vallejo, so as to create a constant and important water power, I should consider it a better site for manufactures than either San Francisco or Oakland.

I unhesitatingly answer in the affirmative the question whether Vallejo within a few years is to occupy a more prominent place in the wealth and business of California than at present.

L. H. SHORTT, C. E.

VALLEJO, July 6, 1871.

I beg to acknowledge the receipt of your note, in which you request my opinion to each of the following interrogations:

"First, How do the natural advantages of Vallejo, for large shipping and railway business combined, compare with those of San Francisco and Oakland?"

"Second, Assuming that San Francisco will relatively lose some of her present foreign commerce, and taking the known influence of railroads completed and capital invested into consideration, with the natural advantages of Vallejo and Oakland, which of these two places has the better prospect of becoming an important seaport?"

"Third, If the water of Clear Lake were brought to Vallejo, how would that place compare as a site for a manufacturing town, with San Francisco and Oakland?"

"Fourth, Is it likely that Vallejo will within a few years occupy a more prominent place in the wealth and business of California than at present?"

In reply to the first:—Very favorably with San Francisco, and they are far superior to Oakland, for the reason that at Vallejo there is an available water front, well protected, of not less than two miles in length, where docks and wharves can be built at comparatively small expense, and at which the largest merchantmen can be loaded directly from or discharged into the cars of the Railroad Company; whereas, the water front of Oakland, outside the bar, is exposed and limited in extent, and can be made use of only after constructing long and very expensive piers, and inside after an extensive and systematic plan is carried out at an enormous expense, the interest of which will necessitate high rates of dockage for many years to come. The geographical position of Vallejo gives it a much more extended railroad connection than either San Francisco or Oakland. It is the natural outlet for all of Northern California, and is on a direct line

of the Oregon traffic, and from its connection with the East may be had over one of the easiest and most direct routes.

To the second, I say:—Vallejo, for substantially the same reasons as given in answer to the question immediately preceding.

To the third:—Yes, decidedly; in fact, I think would be superior to either. The contour of the ground is favorable for taking water at different elevations. The fact that water power is cheaper than steam—the price of land less, the taxes at a lower figure, all the necessities of life abundant and at reasonable rates the supply of raw material obtained with equal, if not greater facility, and the convenience with which the manufactured articles could be put into market, as great—all go to satisfy me that Vallejo would compare most favorably with any city in the State.

To the fourth, I say:—Emphatically, yes. She will shortly be in direct railroad communication with all the northern parts of the State, and will be the wheat market for all that part lying to the west of the Sacramento and Feather rivers, which part is notoriously the most reliable for good crops. The wool and dairy interest is upon the increase and will become tributary, and upon the completion of the branches of the California Pacific Railroad, at present in progress of construction, a large trade in redwood lumber will be developed. The manufacture of wine and the preservation of fruit in the Napa, Sonoma and other neighboring valleys, is at present in its infancy, and will yearly become more developed. These all will contribute to the business and prosperity of Vallejo.

The commercial importance of the United States is rapidly increasing upon the shores of the Pacific ocean, and the value of Mare Island as a naval station is yearly becoming better understood and appreciated at Washington. There can be no doubt but that extensive improvements and additions will be made to the works within the next two or three years, which will give increased impetus to the business of Vallejo.

Very Respectfully, Yours,

L. M. SHORTT, Civil Engineer.

GENERAL B. S. ALEXANDER.

The same four questions mentioned above by L. M. Shortt were also submitted to General B. S. Alexander, the senior officer of the Engineer Corps of the U. S. Army stationed in California, and he has promised to write out an opinion for us so soon as his official duties leave him at leisure for a few days. Meantime he authorizes us to say that his answers on all the four questions are favorable to Vallejo.

DR. JOHN M. BROWNE.

Dr. John M. Browne writes thus:

Vallejo enjoys a salubrious climate in a general sense, being removed from the perfect only by the force of winds, and sudden changes of temperature, which are provocative of the contraction of colds, and for similar reasons unfavorable for consumptives. But when we consider the rate of mortality in proportion to its population, the rare occurrence of any epidemic, and if present its usual submission to treatment, the conclusion is evident that Vallejo is emphatically a healthy place. I have visited and temporarily resided in different parts of the world, where I have treated disease in its various forms, but I have never found as general good results as I have in my practice here, and I can only reiterate my frequent assertion that, in general terms, I regard Vallejo as one of the healthiest cities in the world.

The winds are higher and the changes of temperature more sudden in San Francisco than in Vallejo, so the defects of climate referred to are stronger in the former than in the latter place; but both have climates very favorable to general health and industry.

CONCLUSION.

We have thus discussed the prospects of Vallejo as they appear in the Summer of 1871. We have endeavored to show that San Francisco has reached the summit of her commercial prosperity, and has commenced to decline. Her topographical situation renders her unfit to be the terminus of the railway system of the coast, and by increasing the expenses of handling merchandise is driving and will continue to drive commerce to some other place more favorably situated. This repelling influence began to be felt in 1868, when the interior of the State was first connected with deep water by rail, and it is rapidly increasing in power as the railway system of the State extends.

That San Francisco cannot be a railway terminus, is implied not only by her topographical situation, but also by the conduct of her capitalists. They have done nothing for railroads. Towards 900 miles of finished and 2,000 miles of promised railroads in California, the public treasury has contributed \$41,000,000 and San Francisco probably not more than \$1,000,000. California has two great

inland transportation companies, neither of which has ever had one Director as a representative of San Francisco capital. Both companies are hostile to that city; that is, hostile in a business way. They can make more money elsewhere; and one is trying to build up Vallejo, while the other is helping Oakland. A metropolis which has no voice in the management of the railroads and steamboats connecting it with the interior, and which allows all the means of inland communication to fall into the control of ambitious and progressive rivals is in great danger.

The first effect of railway influence is that wheat can be exported at an expense varying from \$1 to \$2 per ton less at Vallejo and Oakland than at San Francisco. In the crop year of 1867-68, the last named city loaded all the cargoes of wheat exported from the State; in 1868-69 she loaded 98 per cent. of them; in 1869-70, 84 per cent., and in 1870-71, so far, only 56 per cent. Oakland, which took part of the business, did not get her wharf done to accommodate ships until several of the best months of the year had passed, and Vallejo will do much better next year than this, because she has lately got control of the steamers and barges which carry the wheat from the bay and river ports to the ships. Both places are rapidly providing warehouses, docks and other facilities; and as \$1 per ton is too much to be thrown away, the probability is that within three years the loading of wheat for exportation will have left San Francisco. Other exports, the imports and the general financial business of a large seaport most follow the wheat.

Other effects of the railroad influence are that the value of real estate in San Francisco is \$40,000,000 less than it was two years ago; the monthly sales of San Francisco real estate are 63 per cent. less; 3,000 houses, or nearly one-sixth of the substantial buildings are unoccupied; and the shipping arriving from American ports on the Atlantic decreased from 158,000 tons in 1869 to 83,000 in 1870.

Even if San Francisco could be the terminus of the railway system of the State; her water front is so poor, and so expensive that the trade would ultimately leave her. The distance from North Point to Third street is two miles, and most of the way the depth of water is only four feet on the water front line; and under the water there are fifty feet of mud, rendering it almost impossible to get a firm foundation for any heavy structure. West of North Point shipping cannot lie, because the winds and waves are too boisterous. South of Third street it is almost impossible to make valuable water front, because there are extensive coves or mud flats which would have to be filled in at an expense of many millions of dollars—an expense which nobody now wishes to undertake.

These draw-backs, combined with costly grading (the upland site of the city being very uneven), dear water, the danger of earthquakes (more severe on the peninsula than on those parts of the mainland which have a rock foundation near the surface), costly insurance and the danger of fires (more than 75 per cent. of the houses are built of wood) make it certain that San Francisco will cease to be the metropolis of California.

She will be succeeded by either Vallejo or Oakland; we think our town will be the successor. We have great advantages in the matter of harbor, railroad communication with the interior, and connection with the general railroad system of the continent, fitness of site and agricultural resources of the vicinity. The accommodations for shipping at Oakland are two miles from shore, at the end of a wharf which, before the end of next year, will be eaten as badly by the tereedo as to be unsafe. The structure, therefore, is temporary, and the business done by its help insecure. The only permanent basis for foreign commerce would be the construction of a harbor with stone walls reaching out two miles from the mouth of San Antonio creek. Such a harbor would cost not less than \$5,000,000, and if well made, \$10,000,000, and would, besides, require years for its completion. The town has neither the money nor the confidence necessary for undertaking the work, and after completing such a harbor could not compete on equal terms with Vallejo, because much of the trade which it hopes to control might be intercepted at Stockton. The present inferiority of Oakland for railroad purposes is implied by the declared intention of the Central Pacific Company to build a "short road" from Sacramento to Oakland. A new road and a costly artificial harbor are necessary to Oakland, and even if the construction of these improvements should be undertaken it may at any time be arrested when the capitalists who supply the funds are convinced that they can make more profit by throwing their influence in

favor of Vallejo. The latter has her natural harbor and her short roads already completed, and she occupies an impregnable position, fortified by enterprise and capital, so that she is certain to take a considerable portion of the foreign trade, and will threaten if not overawe or overwhelm Oakland.

Put independently of its advantages for foreign commerce and for railroad terminal business Vallejo has abundant resources to be a large and prosperous town. Land, water, coal, pork, beef, flour, potatoes, lumber, firewood, stone, brick, wool, and all the raw materials of home production are and can be got cheaper here than either San Francisco or Oakland; and the superior cheapness of these important items, concurring with the natural advantages of site and position, as the outlet of the richest part of the State will suffice to make Vallejo a city within a few years.

Vallejo has an important advantage in its proximity to many of the most attractive pleasure resorts and natural curiosities of the State. The Vallejo Sulphur Springs only three miles from town, Napa Soda Springs near Napa, the White Sulphur Springs near St. Helena, the Calistoga Hot Springs, the Sonoma Warm Springs, the Petrified Forrest near Calistoga, Mt. St. Helena reaching an altitude of 4,343 feet, the Geysers, Clear Lake, Sigler's Springs, Harbin Spring, the Sulphur Bank and the Borax Lake are visited by thousands every year and are reached by way of Vallejo. The possession of the only Navy Yard on the Pacific Coast, is a point of much importance to our young town. The Yard furnishes employment for about 500 men on an average—sometimes for 2,000—but if the recommendations of Secretary Robeson and Admiral Porter are adopted, there will be employment for 4,000 or 5,000 men here, or enough to support a city of 20,000 inhabitants; and these recommendations must be adopted if we are to keep a high place among the naval powers.

We have published the opinions of a number of leading engineers in different departments, all favorable to Vallejo. General B. S. Alexander is the highest Army Engineer in reputation and rank in the State, and the second in the Union; Von Schmidt is one of the boldest and most successful Civil Engineers in our State; Rear Admiral James Alden is the highest officer who has been connected with the United States Coast Survey of this coast; Calvin Brown is the highest Federal Hydrographic Engineer, and G. Allardt the highest State Hydrographic Engineer in California; C. F. Hoffman is the highest State Topographical Engineer. The office of State Surveyor General is represented by C. F. Houghton, one of the most competent men who has ever filled it. The opinions of navigators are represented by Admirals Farragut and Craven and Captains Baldwin and Franklin, and those of Civil Engineers who devote themselves extensively to railroad business by Messrs. Shortt and Harris. Our list includes so many authorities that we should scarcely exaggerate if we should say that no opinion in favor of San Francisco or Oakland can be obtained from engineers of reputation in California. It must not be forgotten that no company owning an extensive railway system should fix a terminus without the advice of able Engineers.

Taking all the facts in consideration, we regard the prospects of Vallejo as very brilliant, and we confidently expect that within a few years she will be generally recognized as the successor of San Francisco, and the future metropolis of California.

POSTSCRIPT.

Since the printing of this pamphlet was commenced the authoritative announcement has been made that the Central Pacific Railroad Company has purchased the railroads and steamboats of the California Pacific Railroad Company. We have the fullest confidence that this purchase will result in benefit to Vallejo, and that our town will soon be the main terminus of the railroad system of the State. The idea of a short route from Sacramento to Oakland has been abandoned, and the construction of a road from Vallejo to Oakland is highly improbable, since it would cost \$1,500,000, save no time, contribute nothing to the convenience of the travelers, would require much time and offer no profit in any respect. The Vallejo route is already for use, with a good harbor, a finished road and facilities for profit in land such as can be found at no other place. We look forward with confidence to the final and magnificent triumph of Vallejo at no distant day.

VALLEJO IN NOVEMBER 1871.

A SEQUEL TO THE PROSPECTS OF VALLEJO.

THE CENTRAL PACIFIC AND VALLEJO.

About August 1st, a controlling interest in the stock of the California Pacific Railroad Company, was purchased by Leland Stanford, and his associates who are known as the Central Pacific Railroad Company, and who now own the railroad system in the State, and nearly all the steamboats plying in San Francisco Bay and its tributary waters. By their cars and boats they transport 90 and perhaps 95 per cent. of all the trade between San Francisco and the interior. They have possession of all the best routes leading to the chief towns of the State, and there is little chance for any successful opposition to them. They can therefore exercise an immense influence on the inland trade, and upon the growth of the points which they may select for the transaction of the terminal business of their railroad system. Under these circumstances the relations between the Central Pacific railroad and our town are of great importance to us. We think we can safely assert that the Company will do much to build up Vallejo. We expect no unfair discrimination against Oakland or San Francisco, nor does our prosperity require it. All that we ask is a correct estimate of our advantages, and such preference as those advantages demand. Mr. Stanford and his associates are men of much experience in business operations and they will be governed by no petty local influence. They know that the trade must go to the cheapest place, and they wish to assist in taking it there. This course they regard as their personal interest and as important to the welfare of the whole State and to their permanent reputations. Every dollar

saved on landing a ton of imported merchandise and shipping a ton of imported produce benefits the producers, stimulates production and helps to populate and enrich the State.

SUPERIOR CHEAPNESS OF OUR ROUTE.

The Central Railroad Company, will assist us just so far as we assist them—that is so far as they can carry passengers and freight between the Golden Gate and the Sacramento Valley by this route at less expense than by any other. So long as our route is the cheapest, they will prefer it; and no longer. Their recognition of the superior cheapness of our route has been shown by the fact that they now carry their through passengers this way. We understand that they also expect to bring their freight this way within a very few months. Their action is not taken hastily, and we have no reason to suppose that the present method of travel between San Francisco and Sacramento will be abandoned so long as steamboats and steam cars are the vehicles of communication. They come this way because it is cheaper to them and to the people of the State.

The reasons of the superior cheapness of this route are readily found. The distance between Sacramento and San Francisco is 83 miles by the Vallejo route and 138 by the Stockton and Oakland route; the latter is more expensive relatively than the former. The trip by Vallejo can be made in four hours, while the Stockton route takes six. So long as these facts are unchanged the advantages are with the Vallejo route, and there is no sufficient motive for a change. The distance from Sacramento to Oakland might be reduced by an air line road, but it would be very expensive and would not in-

crease the receipts of the Company. They have no opposition and no fear of any, nor could they possibly save more than half an hour in time : and that would not justify an expenditure that could not in any case be less than half a million dollars. When a competing road beats the Vallejo time, then they will be compelled to make a shorter road : nor do we believe that they will ever make one without such compulsion.

SAVING TO PRODUCERS.

The Company will not overlook the fact that while it is cheaper for them to bring their cars to deep water here than to any other point, it is also cheaper for the producers. The Sacramento farmer who wants to send his grain to a ship, saves the freight on fifty miles of transportation by sending it to Vallejo, and to get the same price as he would at San Francisco, and he gets it sooner. The nearer we bring the shipping point to the farming districts the more we benefit the agricultural interest. The expense of taking a ship from San Francisco to Vallejo, is a small matter compared with the expense of sending every farmer with his separate lot of grain from Vallejo to San Francisco. Although the farming community as a whole must ultimately pay the freight on their wheat from their fields to Liverpool, yet it is their interest to advance as little freight money in cash as possible, and the farther inland the shipping point and chief market is taken, the better for them. San Francisco is objectionable because more farther from the grain Valleys and also because the wharfage and port charges are outrageously high—the highest in the world, as well as the inland freight in advance. Vallejo intends to have free wharves.

PROFIT ON LAND.

The Railroad will probably be influenced somewhat by the consideration that other things being equal, they must prefer the point where they can make the most profit on land. It is a settled fact that a railroad well located adds much more than its cost to the value of the land within ten or twenty

miles of it ; and therefore it may be said that every railroad is a source of profit to the community, though the individual stockholders may lose. One of the first principles of railroad building in California is, that the stock-holders should secure to themselves a part of the profit which accrues to the community from the increase given by the road to real estate. A considerable share of this profit is in town lots which can for many reasons be obtained and managed more conveniently than farming land. Two thousand acres of the most valuable land in San Francisco are worth \$50,000 per acre on an average, or \$100,000,000 in all. On several blocks in that city—such for instance as California between Montgomery and Sansome, the price is \$2,000 per front foot, or \$860,000 for an acre 430 feet long, fronting on the street, and 100 feet deep. In that calculation no allowance is made for streets, and the average frontage of the town lots, in an acre is about 250 feet. A common price for lots in good residence streets is \$200 per front foot or \$50,000 per acre, while in poor streets it is \$100 ; so we think the average as given above is not exaggerated. The prices are so high there that the Central Pacific Railroad Company could not get any thing there and nothing to the values in the city on a whole, but by making their terminus at South San Francisco, they might add to the values there but injuring those north of Mission Bay. This terminus however could not be completed until after long delay and much expense, whereas the Company wish to gather their profits immediately, with as little expense as possible and without exciting any such animosities as would be involved by making their terminus at South San Francisco. Two thousand acres of the most valuable land in Oakland, are worth \$3,000 an acre ; and the company could add much to the value there, but not until after spending years and millions in constructing a harbor, and even then Oakland would have no superiority over Vallejo and would for that reason always have a feeling of insecurity. In Vallejo, the best two

thousand acres are worth \$1,000 per acre, and to all this and much more in the vicinity a ten fold increase can be given within a year, if the Railroad Company will indicate in some unmistakable way that they regard the town as the chief terminus of the California railway system, and the spot where the chief landed interests of the Company are situated. At \$1,000 per acre, two thousand acres are worth \$2,000,000; a ten-fold increase on that would be \$20,000,000; and even at that figure the value would be only one-tenth of that in San Francisco. The increase would not be immediate at Vallejo, but it would require no previous expenditure and would be a permanent gain; for if the business were once fixed there, it would never leave. Its establishment there on account of unquestionably superior natural advantages and with the advice of leading engineers, would give no offence in San Francisco and would be warmly approved by the people of the State, who would see in it a reduction in the expenses of exportation and importation.

VALLEJO'S POSITION IN 1868.

Within the last two or three months, that is since the purchase of the California Pacific Railroad—San Francisco has learned that she is in danger, and as a remedy many persons are making a great outcry for a bridge across the bay to bring the cars in. It took her a very long time to learn the danger. The fact was known four years ago in Vallejo and was then discussed publicly. The pamphlet entitled *THE FUTURE OF VALLEJO*, published in the spring of 1868, before any iron had gone down on the California Pacific or Western Pacific road, said:

If San Francisco has money enough to make all the railroads of the State terminate at her water front, she will retain her commercial monopoly and not otherwise.

* * * * *

California is on the threshold of a great change—the establishment of a system of railroads and the overthrow of the ferry-boat or river steamboat communication with the interior. Nearly a century elapsed after the discovery of De Gama, before the Venice of the Mediterranean could under-

stand that her fate was sealed; five years will leave no doubt about the fate of the Venice of the Pacific. What the opening of the sea route to India was to the former, that will be the establishment of a railroad system in California to the latter. So long as there are no railroads, so long San Francisco is all right; so soon as they are built, the business of the State must centre near the Straits of Carquinez.

Although our arguments were scoffed at in San Francisco, they found credence among intelligent men elsewhere. The Sacramento Union in an editorial December 7th, 1868, said:

We know just as well that there is as yet no town on the Straits or on the Coast that can rival San Francisco in wealth as we know that San Francisco in point of natural advantages can in no way claim equality with Vallejo or Benicia as a railway centre, which shall accommodate the State and all east and north of it. We only point out certain natural superiorities of geographical location in favor of the Straits over San Francisco, and advise future builders to do just what the builders of 1849-52 would have done had they believed they were putting up a permanent place, and had the lights which now control men in building up great commercial cities. * * * The natural disadvantages of the latter place (San Francisco) with reference to railways, can never be overcome. No system, no cost can make the point of the peninsula equal in this respect with the Straits of Carquinez.

SCOFFS OF SAN FRANCISCO IN 1868.

These sound opinions were received with blindness and jeers in San Francisco. Business men there said it was folly to speak of a loss of the trade of their city. Some of them thought the terminus of the Pacific Railroad would be at Goat Island and desired that it should be. Those who wish to read a record of scoffs at Vallejo and her claim, can hunt the files of the Bulletin in December 1868, and see the editorial articles from which the following extracts are taken:

The city of the future is here. There is not a railroad or thriving town in the State that does not, and will not contribute to the prosperity of San Francisco long after the childish bubbles of the Union have all been blown up and forgotten—Bulletin, Dec. 14, 1868.

Goat Island is practically San Francisco. The terminus of the Central Pacific will either be just where the Company have designated it in their application to Congress, or as near that point as possible.—Bulletin, Dec. 24, 1868.

Did it ever occur to the writer (in the Sacramento Union) who airs his fancy in this way that this city is the entrepot for the commerce of the Pacific coast, and that having attained this position by its natural advantages, and by the concentration of capital, it is as idle to attempt to change it as it is to attempt to whistle down the wind? The commerce, which under any circumstances could be made to centre on the Straits of Carquinez, would be but a bagatelle compared with the foreign and coast-wise commerce already built up here.—Bulletin, Dec. 28, 1868.

Many other San Francisco papers then spoke in the same manner. The claims of Vallejo and the predictions of her friends are justified by the events of the last three years, and the judgment of the enemies of our town is quite as unsound now as it was three years ago.

The question of a bridge across the bay was also discussed here in 1868. The merchants, capitalists and newspapers of San Francisco declared the Vallejo people were wild; they were sure that the metropolis was not in the least danger. Cities, they said, exercise compulsory power over railroads, and must always strengthen and not weaken those places which were the chief centres of trade before the construction of the roads.

A BRIDGE OR RUIN FOR SAN FRANCISCO.

Their error is now undeniable. The great and uninterrupted prosperity which filled the city from 1858 till May, 1869, ceased immediately upon the completion of the transcontinental railroad. For three years and a half her trade and the general confidence in her future have been diminishing steadily. The question arises whether the decline can be arrested. The Bulletin and the Call think it can, by erecting a bridge five miles long to connect San Francisco with the Alameda shore; and for the last month their editorial columns have swarmed with articles in advocacy of the project. The Alta thinks something should

be done, but considers the bridge impracticable. The following are extracts from editorials on the subject:

We have seen the anomaly of an extraordinary centralization of capital and a decentralization of commerce going on at the same time. * * * What can be done to arrest the decentralizing tendency of commerce at this port? * * * San Francisco must be made a railroad centre. Ships and railroads must come together along our own water front. * * * Without a bridge and a convergence of railroads in this city the decentralization of commerce will go on.—Bulletin, Oct. 5.

To grasp and hold the business that properly belongs to this city, it is necessary that the best facilities for the transacting that business should be provided, most important of these is to supply the missing link, to secure the entrance into the city of all roads in operation or that shall be constructed.—Bulletin, Oct. 25th.

Public sentiment in San Francisco demands an increase of commercial facilities.—Bulletin, Oct. 9th.

The necessity for some such medium of communication between San Francisco and Alameda shores of the Bay other than by vessel has long been felt and discussed by your citizens, but never with so much earnestness nor so much firm belief in its practicability as at the present time.—Call, Oct. 6.

There is only one mode by which San Francisco can prevent it, [the establishment of the chief railroad terminus of the State at Vallejo] and that is bridging the bay—and even that may not be sufficient.—Sacramento Bee, Oct. 25.

San Francisco needs better accommodation for trade than she has now. Although she monopolizes the imports and controls all the exports she is not cheaply accessible from either land or sea. Previous to 1869, circumstances gave her such advantages over every other port in the vicinity that no one thought of going elsewhere on the waters of our bay to load or discharge large vessels. No exertion was then needed to bring business to our wharves; it came by an irresistible gravitation. But the changes in the system of land transportation have altered the relations between San Francisco and the interior and have made it necessary that she should exert herself, and even use the greatest efforts to retain her position and the confidence of business men at home and abroad. The possession of all the chief financial institutions and leading business houses, and of two-thirds of the wealth of the coast does not in itself give security for the future. Trade seeks the

cheapest channel as water runs down hill, and if the concentration of capital at a certain city is not accompanied by superior facilities and cheaper accommodations than can be furnished by commercial rival towns then the trade will not follow the capital.—*Alta*, Oct. 26.

The lessons of the past three years have taught us that if we would maintain our commercial supremacy, we must make our city the central point of the Pacific railway system.—*Golden Era*, October.

Its erection would—and without the slightest fear of truthful contradiction, we make the assertion that nothing else will—put a stop to the cackling of Oakland and Vallejo, and give stability to real estate value here.—*San Francisco Real Estate Circular*, November.

The following are extracts from communications in the *Bulletin* :

The question is simply whether this city is to remain isolated on its seaport, dying out from heart to extremities or whether it will wake up with the energy of old and give it a future second to no metropolis in the world.—*Bulletin*, Oct. 6.

But when they [the opponents of the bridge] reflect, they become convinced that by bridging the bay we effect an insurance upon the future of our city, nay, that it is absolutely essential to the life of this metropolis.—*Bulletin*, Oct. 27.

The city of San Francisco, owing its origin and growth to commerce, seems to have been indifferent to the fact that when the railroad introduces or intrudes itself upon a maritime city, it imposes as a condition of success, that the car and the ship shall come together. While other commercial cities have made, and continue to make great exertions to effect just this result, San Francisco has quietly waited for the cars to bring themselves to her ships, until she finds the railroad transportation of the State, from the south, the east and the north, fast concentrating on the eastern shore of the bay, and her ships passing themselves over to the cars. The fate of Venice awaits her if they are not brought back ; and they can be brought back only by stretching the rails across the bay, and laying their ends upon our wharves. It seems now to be the general impression that this must be done, if we would recover the trade that has escaped from us, retain what we have, and especially secure that of the future, upon which hopes so high have been built.—*Bulletin*, Oct. 26.

These extracts admit, directly or indirectly, that San Francisco cannot maintain her present commercial position unless she be-

comes the terminus of the railway system of the State, and that she cannot become the terminus without a bridge. If the present bridge excitement does not imply such admissions it does not mean anything. If it does imply them, it implies further that the business men of that city have been blind for the last four years, and that their eyes have not been opened until too late. They should have seen this danger before the last spike was driven at Promontory point ; and before the decentralization of commerce commenced. The business already lost can never be recovered, and much more must be lost before a bridge could be completed if its construction with abundant means were to be commenced immediately. Two years would be a moderate allowance of time for the construction of a bridge across a bay five miles wide, with a depth of sixty feet in a channel a mile wide, swept by strong tides and exposed to high winds. In those two years we expect a great accumulation of capital, enterprise and population in Vallejo.

But the bridge will not be built. No definite plan for its construction has been proposed because none that would find favor can be devised. The Central Pacific Railroad Company do not wish to have anything to do with its construction, or at least will not ask for a subsidy ; nor build without it. Neither the State nor the city will build it as public property. Both political parties have pledged themselves against railroad subsidies, and therefore no Government aid can be given to any company to build it. No capitalist has offered to organize a bridge company to do the work with money raised by subscription.

The purpose of the bridge project is to make San Francisco the exclusive terminus of the through traffic of the Central Pacific Railroad Company ; but if the bridge were completed to-day the Company would not, in our opinion, accept it as a present if offered with a condition that they would promise to make it their exclusive terminus for ten years,

Besides, Congress which has authority to

regulate commerce, and has the control of the navigable bays of the country, would not consent to the obstruction of the southern half of San Francisco bay, with the probability that the flow of the tide would be checked, the deposition of mud facilitated, the influx and efflux of water at the Golden Gate lessened, and the depth of the channel at the bar reduced. The Superintendent of the U. S. Coast Survey will protest, if occasion requires, against the construction of the proposed bridge on the ground that it would inflict a serious and irreparable injury to the entrance to the bay, which should be protected in the interests not of California alone, but of the Union and the whole world. The Superintendent, Prof. Pierce, was here last year and expressed his opinion very emphatically against permitting a bridge from Oakland to Goat Island, and for much stronger reasons he would object to a bridge across the bay.

The bridge project depends for success upon the concurrence of a number of contingencies not one of which is secured, including a short line from Oakland to Sacramento, the exclusive favor of the Railroad Company, and the consent of Congress. To secure either would be difficult and to secure all is in our opinion impossible. The logical deductions from these facts and premises are, that the bridge will not be built, that San Francisco will not be the railway centre of the State, that the decentralization of commerce will continue, that the decentralization of capital will soon follow, that San Francisco will no longer be the only noteworthy seaport of California, that it will soon have a formidable rival for the metropolitan position, and that it will lose more and more every year until it shall no longer be the chief city of the State. The only rivals of San Francisco are Vallejo and Oakland, and in a contest between the last two, the former will carry every point. Oakland has no harbor, has made no arrangements to provide one, and has had no resource worthy of note save the exclusive support of the Central Pacific Railway Com-

pany—which exclusive support is now withdrawn. Oakland is not sure of anything save a little local business. The through freight will probably go to Vallejo, and the San Joaquin Valley freight may have its port at the Straits of Carquinez, when the Banta's, Martinez and Oakland road is completed. This road will give short routes from a point opposite Vallejo to the San Joaquin Valley and the Southern coast and will complete the concentration of the railway system of the State at our harbor.

There has been some talk about a bridge across the Straits of Carquinez, but we do not expect to see such a structure. A low bridge would obstruct navigation and be subject to the dangers of a draw, and a high bridge would require steep grades on each side and be very expensive, besides it would yield no profit to the Company and be of little convenience to the general public. If the cars must reach Oakland from Sacramento by way of Stockton, then Oakland even if she had a deep secure harbor could not compete on equal terms with Vallejo; but having neither the short road nor the harbor, she has no chance whatever. The present long wharf will not last many years, and the outer portion of it when it once gives way will never be replaced.

The grand fact remains that the height of ambition, of San Francisco and Oakland at present is bring the cars from Sacramento by short routes to their wharves—that is to place themselves on an equality as regards railroad facilities with Vallejo, and it is almost certain that they cannot succeed. As to superiority, they do not think of it.

PROTEST AGAINST HIGH PORT CHARGES.

The present dues levied by the Harbor Commissioners were fixed by the advice of the Chamber of Commerce of San Francisco, and the port charges taken as a whole have not been changed materially since 1864 and though less than they were before that date are still exorbitant. The San Francisco Chamber of Commerce held a meeting on the 19th day of October. Mr. Friedlander, in an address to the Chamber, spoke thus :

Let us see what our port charges are :

A foreign vessel of 1,200 tons register entering our port is subject to the following fees :	
Tonage dues, 30c. per ton.....	\$360 00
Entrance Surveyor's fees.....	5 50
Commissioner of Immigration.....	1 00
Inward Pilotage.....	150 00
Outward Pilotage.....	150 00
Wharfage 15 days \$27 per day for discharging cargo.....	405 00
Wharfage Loading 15 days, \$13 50 per day.....	202 50
Warden's Survey.....	75 00
	\$1,349 00

(This does not include stevedores' charges, to which vessels are subject in every port).

These charges are so excessive that ship owners are reluctant in sending their vessels to our port. Only ships carrying cargoes destined for this city come to us, but very few of the many which go to other ports in search of cargoes ever come to us seeking freights.

Fifteen dollars per ton is remunerative, and ship-owners will not dread sending their vessels to San Francisco seeking, if we abolish all port charges. This is our true policy ; and instead of paying \$20 per ton for freight, \$15, and even \$12 50, will be accepted, and with such a crop as we have a right in ordinary reason to anticipate, there will be a saving to the producer of from three to four and one-half millions of dollars annually.

Our Harbor Commissioners spend annually about \$138,000, but should we abolish the charges for wharfage, it will hardly require more than one-half that sum to keep our wharves in good condition. Then this amount, or whatever sum may be required will have to be made by special State tax.

I have stated that the producers alone would save about four millions dollars annually, but it is not the producer of grain alone that is benefited. The freights will be lower on most imports into our State, and thus all consumers become interested in the questions.

On the 22nd of November, the Committee to whom the subject was referred, made a report. They found that the Harbor Commissioners now collect \$230,000 as wharf dues in a year, and they propose to reduce the amount to \$180,000. The dredging costs \$100,000 ; the repairs and cleaning of the wharves \$61,000, and the salaries of wharfingers, \$21,000 ; the rent and salaries of engineer, counsel and commissioners, \$25,000. It is evident that there will not be much to spare for the seawall of which the Committees' report, adopted by the Chamber of Commerce, says :

The importance of the latter measure is so manifest that it would be a mere waste of words to enlarge upon it ; but as under the present law it can only be built out of the surplus revenue of the wharves, and as it is evident that under even the present tariff of charges no such surplus can be depended on, it is manifest that the chances of its early completion are extremely slight.

The city of San Francisco will have to do the work itself, and after looking at the matter in all its lights, your Committee are unanimously of the opinion that a bill such as that passed by the last Legislature (but which failed to become a law), by which the city was authorized to issue bonds for a million of dollars, or for whatever amount would be required for the completion of the wall, out of the proceeds of which the wall was to be completed, should be urged upon the consideration of the next Legislature.

This means that the shipping at San Francisco must pay \$180,000 annually for dredging and repairs, and that a tax of \$100,000 or perhaps \$200,000 per year must be levied directly on the assessable property of the city, and indirectly on the business of the city to pay for the bulkhead.

The San Francisco Bulletin says :

It has always been understood that the cost was to be met by an issue of city bonds. Two years ago Gov. Haight pocketed a bill which authorized the issue of bonds to complete the sea wall, so that an immediate reduction of port charges would be practicable. This measure, had it become a law, would have lessened the cost to interior consumers, for all the charges on the bonds would have been met in a long term of years from tolls so light that they would not have been felt as a tax by any but shippers themselves.

City bonds must be paid by the producers of the district which supports the city ; so the Bulletin's plan means the levy of an indirect tax on the State to pay for the improvement of the water front of San Francisco. It says the interest on the bonds would be paid by tolls that would not be felt by anybody but the shippers—by which terms the city purchasers of produce for exportation are only meant, but even then they would not pay out a considerable sum without making the farmers feel the burden. So long as San Francisco had the monopoly of the foreign commerce of the State

so long she adhered to the opinion that the wharfage and dockage should yield enough to pay for a smooth and imperishable seawall along the water front, at a cost of about \$2,000,000 per mile; but Vallejo has scared her out of the notion, and what she will want next, time only can discover.

CAUSE OF PROTEST AT THIS TIME.

The high port charges have helped to enrich San Francisco. They all went into the pockets of San Francisco people; they were all paid by the producers of the State who were thus impoverished to enrich the metropolis. So long as San Francisco had the monopoly of the import and export trade of the State, the Chamber of Commerce remained silent, but when the Central Pacific Railroad Company bought out the California Pacific, and thus obtained the means to make Vallejo the main terminus of the railroad system of the State, the Chamber of Commerce immediately discovered that the charges were too high. The discovery comes too late. The evil has prevailed too long. If any reform is needed now, it was needed quite as much four years ago when we called attention to the exorbitant charges and predicted that they would enable us to underbid the peninsular city and take trade away from her. The proposed change will not secure any important reduction in the expenses of importation; and the present excitement about the harbor does like that about the bridge will not reduce the cost of transacting business at San Francisco and is interesting to us mainly as a confession of weakness and fear of the competition of Vallejo.

RAILROAD WORK LAID OUT.

The Central Pacific Railroad Company, have made improvements at our water front at an expense of perhaps \$100,000 to prepare for bringing the overland business this way, and have had ordered new charts of the harbor as if they contemplated other improvements. They will probably lay a double track between this city and Sacramento and put the route in the best condition so as to accommodate the large traffic that must come over it. They have com-

menced to extend the road from Healdsburg to Cloverdale, a distance of fifteen miles, and the cars will reach the latter place before May next. They have commenced to build a road from near Petaluma to Bloomfield, in the Bodega region, and they will certainly next year build a connecting road from Suscol or vicinity to the Petaluma and Russian Valley road. This connection will bring the best part of the trade of the northern coast to Vallejo. A branch will also extend from Woodland northward to Colusa, and the Oregon and California road continue its course to the boundary of the State. With the completion of that enterprise all the main valleys accessible on level routes from the Golden Gate on the northern part of the State will be supplied with railroads within convenient reach.

VALLEJO LAND IMPROVEMENT COMPANY.

A company styled the Vallejo Land and Improvement Company, has been incorporated with a capital stock of \$4,000,000 and John B. Frisbie, Leland Stanford, Milton S. Latham, F. D. Atherton, Alexander deLaski and E. H. Green, as Trustees. Gen. Frisbie owns more land in and about Vallejo than any other individual, and may be considered one of the wealthiest men and chief land owners of California. He purchased the Suscol rancho, including the site of our town, from his father-in-law, Gen. Vallejo, more than twenty years ago, and has struggled to build up a metropolis here ever since he has become the owner. He possesses eminent business capacity and will be the manager of the affairs of the Association. Leland Stanford, as the President of the Central Pacific Railroad, is one of the distinguished men of the age, and a most valuable friend of our town. Milton S. Latham, is the manager of the London and San Francisco Bank, an institution which has a capital of \$5,000,000. He is besides the adviser of several prominent European capitalists, and has enabled them to make large profits by various transactions and stands high in their confidence. It is safe to say that he controls more money than any other man in the State. Mr.

Atherton, is a capitalist, distinguished for the coolness and soundness of his judgment and his good opinion of Vallejo is an assurance of success. Messrs deLaski and Green, are London capitalists of very great wealth.

We are now assured that this Company mean business. They own a large amount of land at Vallejo, and will seek to give it high value. They will not expend less than \$1,000,000 cash and perhaps the full amount of their capital stock in making improvements, including wharves, warehouses, factories and dwellings. They will probably make arrangements for the establishment of extensive wine cellars, and metallurgical works for refining argentiferous lead, of which large quantities are now brought from Nevada and Southern California, and for the reduction of ores generally. The advantage of our town for such industrial establishments are evident and manifold.

GROWTH OF VALLEJO.

In 1860, Vallejo cast 464 votes, and was the twenty-third town in the State; in 1864 it cast 558 and was the eighteenth; in 1867 it cast 682; in 1869 it cast 1,108 and had become the seventh town; and in 1871, it cast 2,088 votes and was surpassed only by Sacramento, which cast 4,297, and by San Francisco which cast 25,112. It now has the third place in the State, and is just now going ahead with great rapidity, and the general opinion among our citizens is, that the growth of 1872 will exceed that of any two years in the past. We expect that our town will soon claim the second place in the State.

SAN FRANCISCO IN WANT OF A POLICY.

The San Francisco Bulletin, of November 28th, said in its leading article:

San Francisco has reached her present stage of growth without any particular policy of development. We are now confronted with the question—What well defined policy for the future is to take the place of the temporizing, hap-hazard policy of the past. Vallejo has a defined policy; and the same is true, in a qualified sense, of Oakland. But who will initiate a policy for San Francisco? Where else can we look but to a Board of Public Works? If a

bridge across the Bay is desirable, or undesirable, the people want to know the fact from the best possible source. What relations, if any, will this city sustain in the future with the Central Pacific Railroad Company. Here are three hundred millions of property. Shall a powerful railroad corporation become secretly or openly hostile to these interests, and so enter upon plans of subversion, depletion and decentralization? Or through the offices of a Board of Public Works to speak with authority in behalf of municipality, shall these interests be made to harmonize, so that they shall mutually aid each other. Is the commerce of this city to be strangled out of existence or shall we have nominally a free port, even if Harbor Commissioners are abolished?

This it will be observed, is a confession of weakness. It implies either that the business men of San Francisco are grossly incompetent or that the site of the city is so disadvantageous that they cannot protect it against the rivalry of Vallejo. This is a late day to be perplexed about a policy when the city is already beleaguered.

OPINION OF ADMIRAL ALDEN.

The following are two professional opinions addressed by James Alden, Rear Admiral, U. S. N., to two different gentlemen interested in Vallejo. Admiral Alden, was for eight or nine years in charge of the U. S. Coast Survey in California and is in rank and in reputation to any person who has been in charge, and therefore he is the highest authority in that branch of the service upon the fitness of the harbor of Vallejo for large seaport business:

{ BUREAU OF NAVIGATION,
NAVY DEPARTMENT,
WASHINGTON, AUG. 5, 1871.

DEAR SIR:—In answer to your question asking my opinion of the situation of Vallejo, in regard to its prospects, and advantages of communication with the sea and interior of the State, &c., I would say, I happened to be present when the strife was going on between Benicia and the sand-hills of Yerba Buena, for the location of the city which was destined to be the Metropolis of the Western Slope of this great continent: and it was with the deepest regret that I observed the present site of San Francisco adopted. Its proximity to the ocean, is the only thing in its favor. But the question might be asked if every other advantage was to be given up for that, why did

they not then build the city of New York on Sandy Hook? Besides, San Francisco, for all practical uses, might as well be on an island. The only way to reach the interior except to the south, is first to cross a wide sheet of water where bridges are impossible.

Vallejo is much more favorably situated than San Francisco for such communication and its distance from the ocean, some 25 miles, would hardly be considered, especially by ocean steamers. It is therefore well adapted for the transaction of a large shipping and railway business, and will in my opinion, become an important city. No other place in California has so many natural topographic and hydrographic advantages, and the course and situation of the best routes for communication between the interior and foreign countries by sailing vessels and ocean steamers, and between the different parts of the State by rail and river steamers, when considered together, point to Vallejo as the place best fitted for the future metropolis of California.

Respectfully Yours,

JAMES ALDEN,

Rear Admiral, U. S. N.

J. P. JACKSON, Esq.

The following from the same officer was addressed to another gentleman interested in Vallejo:

{ BUREAU OF NAVIGATION,
NAVY DEPARTMENT,
WASHINGTON, AUG. 9, 1871.

To your request for my opinion on the relative advantages and prospects of San Francisco, Vallejo and Oakland, I beg to make the following answer:

I regard the hydrographic facilities of Vallejo as at least equal, and its topographic advantages as incomparably superior to those of San Francisco. Its location is such as to make it the natural entrepot of the interior of the State, and of the whole country to the eastward; while its situation near the bay is in every respect eligible for the prosecution of the most extensive foreign commerce. The only natural advantage which San Francisco can be said to have, is its shorter path to the sea; but the difference in this particular between the two places is practically unimportant, in comparison with every other natural advantage in favor of Vallejo.

I regard both Vallejo and Oakland as much more favorably situated than is San Francisco for commercial or other interests; the water of Clear Lake brought to the former place, other things being the same, I think Vallejo will naturally become the greater place of business. Moreover, in

view of the present railroad system of California, and of the relative maritime situation of the two places, I am inclined to think that Vallejo has the better prospect of becoming an important seaport than Oakland. And indeed, taking into view all these circumstances, I can hardly resist the conviction that Vallejo is not only far better fitted, but is destined to become one of the largest towns situated on those inland waters. Very Respectfully Yours,

JAMES ALDEN,

Rear Admiral.

The following opinion of an eminent engineer, is worthy of consideration:

OPINION OF B. S. ALEXANDER, LIEUT. COL. OF
ENGINEERS, AND BREVET BRIG. GEN. U. S. A.
SAN FRANCISCO, CAL.

July 1st, 1871.

GEN. J. B. FRISBIE, Vallejo, Cal.

Dear Sir:—I have only considered your inquiries as to the future prospects of Vallejo; the probabilities of its becoming a great railway terminus, and an important commercial emporium. A knowledge of the western coast of the United States, coupled with an acquaintance with the capabilities and advantages of the productive valleys and extensive inland waters of California will enable any one to foresee without the gift of prescience that the chief commercial cities of this coast will eventually be situated at some point on these inland waters. But, when we look at a map of these inland bays, or traverse their extent, and reflect that they present one hundred and fifty (150) miles of shore line, it would seem presumptuous at first sight, for any one to undertake to foretell at what position on this long shore line, the great commercial metropolis of the Pacific Slope will be finally located. When however we examine the map carefully, we soon perceive that the greater portion of the shores of these inland waters are fringed with a border of swamp and overflowed land, or cut off from deep water by extensive mud flats, thus greatly restricting the area that is suitable for active commercial pursuits. We notice too, that where the bold waters approach the shores, the latter are generally of a rugged and precipitous nature, forbidding the idea, with the limited means available in a new country, of either filling up or excavating a site for a great city in our day or generation.

A still closer examination reveals the fact that there are only a few points that possess

the requisites of a bold water front and available space for building purposes, having proper relations to each other; and that even these few places possess these indispensable requisites only to a limited extent. Of these places San Francisco and Vallejo are the most prominent, and these will doubtless become the great seats of commerce on the shores of these waters. Oakland it is true is a rival, particularly since it has become the terminus of the Central Pacific Railroad. But Oakland has no harbor for sea going vessels. She only has a long wharf extending from her shores, some two miles out into the Bay. Until she constructs a harbor, no combination of capitalists can secure her success as a commercial emporium.

When California almost sprang into existence some twenty years ago, San Francisco, from her position at the very entrance to the tidal waters of the State, was the natural stopping place for sea going vessels, and she became a great city because of her favorable position to link the ocean commerce by means of river steamers, with the interior trade and business of the State. It may be said that she owes her growth up to the present time, to a great extent at least, to her ocean steamships and her bay and river steamers. But a geographical position for ocean traffic although absolutely necessary, is not the only condition upon which the growth of a city depends. In these days of rapid communication a position is almost, if not quite as necessary to maintain supremacy as a favorable commercial site. It is a common saying that when capital becomes *fixed* it will not change; and San Francisco to a great extent at least founds her hopes for future greatness on this dogma. We may admit the truth of the proposition in a general sense, that capital when once fixed, is slow to change; but it must be modified by that other and still more overruling law, that capital is always seeking for the best investment, and will change its location when it becomes its interest to do so. Many instances of such changes could be cited in the histories of other cities, but one more in point than any other, as bearing directly on the future prospects of Vallejo, is the history of the great steamship lines via Panama and Nicaragua during the past few years. When there was no railroads across the continent, capital sought these lines of communication, was freely invested, and they flourished. But as

soon as an overland route was opened, travel and trade sought it, and as a consequence one line of steamers is already discontinued, and the stock of the other is very much depressed. So also of the river steamers from San Francisco to Sacramento and Stockton. Only three years ago these steamers were crowded daily with passengers; but now that we have a railroad from Vallejo to Sacramento and from Oakland to Stockton and Sacramento, the glory of these steamboats has departed; the finer boats have been withdrawn to other lines, and the remainder given up to the transportation of slow freight.

In short, capital when once invested *may* be induced to change, and railroads may bring about the inexorable reasons which produce the change. In fact railroads may become quite as necessary to the growth of a great city as a favorable commercial site. We have only to study the histories of our great American cities like New York, Boston, Philadelphia, Baltimore, Chicago, Cincinnati and St. Louis, to be convinced of this truth. The history of San Francisco in this connection has yet to be written, for the railroads of this coast are yet in their infancy. I imagine however that her reflecting men have not failed to notice the disadvantages of her isolated position and to see how much better it would be for her, if the Central Pacific Railroad and the California Pacific Railroad could terminate within her borders. If San Francisco with all her other advantages of position of proximity to the ocean, her magnificent bay, and her capital already fixed, could be the chief railway terminus of California, she would doubtless continue to hold her position as the metropolis of the Pacific. But her position—almost insular, inexorably forbids that she can ever become the chief railway terminus on this coast. Can she then continue to be her principal city? This is a question which is now beginning to agitate her citizens and is the question of the day with her capitalists.

That San Francisco will not be the terminus of the Central or Western Pacific Railroads is clearly seen by the action of the managers of these roads. If San Francisco was intended to be the terminus of the great overland railroad, we would see a bridge across the upper portion of the bay, probably at or near Ravenswood; we would see a level railroad brought to the city east of the San Bruno mountains; we would see a tunnel through

the hill at South San Francisco ; extensive piling at Bay view and Mission cove, and the railroads brought into the city. We would also see steps taken to open a side railroad street along the entire water front of the city, from the foot of Third street to Megg's wharf with turnouts to the wharves, so that cars could be loaded and unloaded from ships-tackle. If we could see these things done, or being done : if we could see her citizens and her authorities acting in harmony with the Central and Southern Pacific Railroad Companies to establish the termini of these roads on her wharves, we might conclude that she was determined to make a struggle to retain at least the supremacy. But we fail to see any such struggle. On the contrary, we see the Central Pacific Railroad Company establishing their depots in Oakland. We see extensive wharves and warehouses constructed there. We see the company and its managers securing extensive franchises along the water front and we have a project for dredging out San Antonio creek, extending it to deep water and walling it in, so as to present a long line of secure wharfage to sea going vessels.

What does all this mean ? It means so far as the Central Pacific Railroad Company is concerned, that they intend to make this their terminus in Oakland, and it is altogether likely that the Southern Pacific Railroad will go there too. As between San Francisco and

Oakland, the decision of this great company has been made, and Oakland has it to be the railroad terminus. And if Oakland was the only point on the tidal waters connected with San Francisco Bay suitable for such terminus, or if it was the best place for it, the decision in its favor would be conclusive. But Oakland as yet has no harbor for seagoing vessels. She has only a long wharf extending out into deep water. Until she excavates a large, secure and deep harbor, no combination of capitalists of railroads and steamship companies can secure her success as a commercial city.

In the meantime Oakland has a rival with a secure harbor and fine water front already made to order. That rival is Vallejo. With these and her other natural advantages, let there be a combination of the Central Pacific and California Pacific Railroads, which is highly probable at an early day, for the interest of both of these roads point in this direction, and then another combination with the China steamers, and Vallejo would be at once converted into the great railway centre of the State ; the proposed great harbor at Oakland would probably never be excavated, and Vallejo from that time forward, would contend with San Francisco alone for commercial supremacy. Very Truly Yours,

B. S. ALEXANDER,

Lt. Col. of Engineers

Brevet Brig. Gen. U. S. A.

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